A.P.P.L.E.™ Co-op

PRODUCTS CATALOG Fall/Winter '85/'86

BIG BOARD™

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VOLUME 8, NO. 4

CONTENTS

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AMPERMANAGER VERSION 2.0
by Rick Sutcliff
Apple II+,IIe,IIc

This popular ampersand utility package works under ProDos and Dos 3.3 with both versions residing on the same disk! Read or write disk blocks at will in ProDos, and any Track/Sector pair in Dos 3.3. Over 70 useful utilities including shorthand Applesoft commands, improved input supporting lower case and allowing commas and colons, formatted printing (print using), and many, many more. See "THE NORTHERN SPY" in the July 1984 issue of Call -A.P.P.L.E. for further details.

PRODUCT CODE	SAMP
A.P.P.L.E. PRICE	$ 22.50
SUG. RETAIL	$ 34.95
SHIP. WT.	8 OZ.

APMAIL.PRO
By Ken Kashmarek,adapted from a program by D.D.Redhed and F.W.Merchant
Apple II+,IIe,IIc

A new enhanced version of A.P.P.L.E's excellent mail data base program, AP MAIL II(VERSION 3.0), to run on the expanded capabilities of Apple Computer's ProDOS. AP MAIL.PRO utilizes a new machine language sort that runs nearly 400% faster and programs are also renumbered to facilitate user modification. Utilities have also been provided for easy DOS 3.3 AP Mail conversion with additional fields for the search and sort subroutines. Thorough knowledge of ProDOS commands required for use of this program.

PRODUCT CODE	SAPMPR
A.P.P.L.E. PRICE	$ 35.00
SUG. RETAIL	N/A
SHIP. WT.	3 OZ.

THE APPLESOFT CARPENTER //
by Wayne Eastwood
Apple II+,IIe, IIc   (Dos 3.3)

A collection of seven utilities which enhance programming productivity.
The Lister: provides formatted listings of Applesoft programs.
The Comparer: compares two Applesoft programs.
The Cruncher: compacts Applesoft programs.
The Converter: converts Integer Basic files to Applesoft.
The Constructor: allows Integer Basic to be converted to Applesoft format to provide back up documentation of original program.
The Finder: finds all occurrences of a string.

The Keeper: allows you to preserve variables during line editing.
This diskette is a much revised version of the original Carpenter.

PRODUCT CODE	SCAR
A.P.P.L.E. PRICE	$ 20.00
SUG. RETAIL	$ 34.95
SHIP. WT.	4 OZ.

APPLESOFT PROGRAM EDITOR (A.P.E.) DOS 3.3
by Richard Hackl
Apple II,II+,IIe,IIc

We think that A.P.E. Is the most valuable tool a person can have for programming in Applesoft. It has all the key features of the old standby's (PLE and GPLE), and much more. This program is a must! The FULL-FUNCTION EDITOR lets you change a line or an entire range of lines with a few keystrokes. Simply move to where you want to insert or delete and A.P.E. makes space for you. No awkward cursor-tracing needed. Search/replace a letter or phrase. True screen editing within an Applesoft line. Always there when you need it: Monitor, immediate mode, even in a running program! ENHANCED ESCape EDITING: There are times when the quickest way to copy a phrase is to "ESCape-IJKM" the cursor, trace what you want and hit return. Ever been lost? A.P.E. shows you a copy of the line as you build it! You can use this even in the middle of editing an Applesoft line. ADVANCED RENUMBER: Frustrated by your memory hog renumber program that isn't there when you need it? Did you try renumbering your "Super Big-Boy" program to find that you suddenly rendered your twenty page listing worthless? Now renumber can always be there with the editor, but in no more space than most editors. Best of all, A.P.E.'s Auto-Renumber capability lets you fix forever the starting line number for each major program section with a single renumber command. APPEND, another feature of renumber, makes it easy to bring in subroutines from a library or merge two program segments together. A.P.E. takes care of the mechanics, now you can concentrate on producing good program structure. QUICK TYPE: Save keystrokes. For example, you may define "ESC 1" to mean "CATALOG,D1". Whenever you type "ESC 1", Quick-Type takes over and catalogs the disk. If you prefer, just use the predefined Quick-Type functions. CHOOSE THE CONFIGURATION: Select where you want A.P.E. and DOS.. both in the lower 48K or choose to put A.P.E. or both into the language card area to give your programs more working space.
COMPATIBILITY: We're honest. Here are the restrictions. A.P.E. must be in the language card to use Renumber/Append. Integer BASIC is not supported. Works with Videx Videoterm and Ultraterm, Vision 80, Viewmaster 80, IIc and IIe 80 column cards. HACKL EVEN SHOWED US HOW HE DID IT and we know it works great.. but all of this in 4K (5.5K counting Renumber)?

PRODUCT CODE	SAPE
A.P.P.L.E. PRICE	$ 30.00
SUG. RETAIL	$ 49.95
SHIP. WT.	1 LB.

A.P.E. PRO
Apple II,II+,IIe,IIc (64k required.)

NEW

Now our popular DOS 3.3 editor runs under ProDOS. The package comes with both versions on disk as well as a full manual with tutorial and a ProDOS addendum. We think you'll agree that it is the best Applesoft editor around. The REM Renumber feature encourages good program structure. A single command allows you to clean up the numbering while keeping the starting line number of each subroutine fixed.

FEATURES INCLUDE:

- Full-function line editing
- Advanced Renumber - Append
- REM Renumber keeps your subroutines line numbers intact
- Global editing- Search, replace
- Keystroke-saving QuickType functions   in line!
- Enhanced ESCape editing

PRODUCT CODE	**SAPEP**
A.P.P.L.E. PRICE	$ 37.50
SUG. RETAIL	$ 59.95
SHIP. WT.	1 LB.

ApTEST
BY Mike Butler
Apple II+,IIe,IIc

Low-cost diagnostics program designed to thoroughly test your Apple. ApTest features tests of both RAM & ROM memory, modem, keyboard, disk drive speed, drive head alignment, drive controller card and the game I/O. Will test Apple II,][+,IIe and IIc.

PRODUCT CODE	**SAPT**
A.P.P.L.E. PRICE	$ 20.00
SUG. RETAIL	$ 34.95
SHIP. WT.	2 OZ.

BIG MAC.C
by Glen Bredon
Apple II+,IIe,IIc

DON'T LET THE NAME FOOL YOU! This program works great on the entire Apple II family! It is a powerful, co-resident editor/assembler for which Ted II+ and BIG MAC.LC files are upward-compatible. Easy-to-use program features MACRO capability, fast (2000-3000 lines/minute) conditional assembly, full feature editor, support of all 6502 and the new 65C02 opcodes, Sweet 16 pseudo-opcodes, and all logical and math operations. In addition, you may generate up to three different symbol tables (alpha by label, numerical by address, cross referenced by line). For development of very large programs, the source code may be assembled directly from disk and the object code itself assembled directly to disk. An extensive well written manual is included (193 pages). The stand alone disassembler provided handles 65C02 opcodes and generates compatible source code. Bonuses include a variety of useful assembly language routines, and a clever system that will print you a fully labeled and commented disassembly of the Applesoft language.

PRODUCT CODE	**SMACC**
A.P.P.L.E. PRICE	$ 40.00
SUG. RETAIL	N/A
SHIP. WT.	1 LB.

COPY][PLUS 5.5
from Central Point Software
Apple II+,IIe,IIc   (64k required)

NEW

COPY][PLUS 5.5 is one of the most powerful backup copy programs available, and is also our choice as the most versatile and comprehensive disk/file manipulation utility program available for the Apple II series computers. The powerful bit copy program in COPY][PLUS allows you to automatically backup over 400 copy protected programs! No more worry about blowing expensive master disks and no more down time while waiting for replacements to arrive. COPY][PLUS 5.5 also allows you to:

- **COPY** files, entire disk, or Dos from one disk to another.
- **CATALOG** normally or show file lengths and addresses, deleted files, or hidden characters in file names.
- **DELETE** files or Dos.
- **LOCK/UNLOCK, RENAME, UNDELETE** files.
- **ALPHABETIZE** your catalog listing.
- **VERIFY** disk, files, identical files, and also drive speed.
- **VIEW FILES** see the contents of a file as values or text
- **TRACK SECTOR MAP** shows occupied parts of the disk .
- **SECTOR EDITOR** allows you to directly modify disk sectors
- **CHANGE BOOT PROGRAM** does exactly that.

PRODUCT CODE	**S2CPY**
A.P.P.L.E. PRICE	$ 25.00
SUG. RETAIL	$ 39.95
SHIP. WT.	14 OZ.

DISK ANALYZER 1.3
By Ronald A. Thisted,Ph.D.
Apple II+,IIe

This is a utility for viewing and printing the raw contents of a disk. Features a specially formatted printout of the VTOC, catalog, and track/sector list. Once this information is viewed, you can proceed to read sectors of any particular file. This is especially useful in investigating bad word processor files. The program is well documented to provide a learning experience in programming and in using RWTS. The program is mostly in Applesoft and Big Mac source files are included for the binary portion of the program. This program can be used by a beginner. Requires any Apple with Applesoft and one disk drive. A printer is useful.

PRODUCT CODE	**SDOSAN**
A.P.P.L.E. PRICE	$ 12.50
SUG. RETAIL	N/A
SHIP.WT.	2 OZ.

Apple II SOFTWARE

CALL - A.P.P.L.E. *FASTFIND*
by Jim Hammond
Apple II+,IIe,IIc,III

NEW

You've been asking for it for years, and now we've got it! A complete computerized subject Index of the first seven years of our A.P.P.L.E. publications. All CALL - A.P.P.L.E. magazine articles, letters to the editor, are carefully summarized with key words to help you find the facts you need when you need them!

- Single or multiple search keys
- Search supports wildcards and logical operators
- Program listings with "fixes" in later articles cross referenced-no more wondering why the program won't work.
- Print hardcopy reports of your searches.
- Easily add or change entries with your text editor.
- Search multipl disks with one keystroke.
- Watch for summaries of other publications.

PRODUCT CODE	SFAST
A.P.P.L.E. PRICE	$ 15.00
SUG. RETAIL	$ 30.00
SHIP. WT.	8 OZ.

FASTFIND - BONUS UPDATE

NEW

The disk contains the Call-A.P.P.L.E. FastFind index for the first six months of 1985. As a special bonus, this disk also includes the Author and Title index for the magazine from 1978 through 1984. For those who have not already used FastFind, you will be amazed at how many solutions to your computer problems have been offered in the pages of Call-A.P.P.L.E. over the last few years. Call-A.P.P.L.E. FastFind gives you a practical way of locating that information when you need it. (The Bonus Update requires that you have the original CALL-A.P.P.L.E. FastFind disk.

PRODUCT CODE	SFAST1
A.P.P.L.E. PRICE	$ 7.50
SUG. RETAIL	$ 15.00
SHIP. WT.	2 OZ

GRAFMAGIC
by Stuart Cowen
Apple II+,IIe,IIc

GRAFMAGIC is an ampersand extension to Applesoft BASIC offering 64 new commands as well as a powerful Hi-Res character generator. Commands are included to scale, rotate, invert, erase, copy, scroll (in four directions), fill in, and flip selected portions of the screen. Other features include an implementation of Turtle Graphics which allows up to five "turtles" to be moved independently, a sound generator with true-to-pitch notes, a number of interactive tutorials. The character generator can print text of any size ranging from normal up to full screen and will support underlined, boldface, inversed, super- or subscripted and upper or lowercase characters.

PRODUCT CODE	SGRAFM
A.P.P.L.E. PRICE	$ 12.50
SUG. RETAIL	N/A
SHIP. WT.	2 OZ.

GRAPHICS BUILDER
By Alton Loe
Apple II+,IIe

This is a graphics utility which allows one to draw a HIRES picture and save the picture as a standard binary file or as a more compact text file of x-y coordinates and commands. This program may be used to modify an existing picture, to put labels on a graph or a moustache on Hopalong Cassidy. Additional commands allow expansion or contraction of the picture (and corresponding coordinate table), pen color selection, goto XY, and reference grid. When used in conjunction with APGRAPHICS: The Filler, Graphics Builder makes possible sketch-and-fill techniques very popular for creating HIRES adventure games. Fill commands are recognized by the Graphics Builder's editor if APGRAPHICS: The Filler is in memory.

PRODUCT CODE	SGRABU
A.P.P.L.E. PRICE	$ 12.50
SUG.RETAIL	N/A
SHIP. WT.	2 OZ.

HIGHER TEXT PLUS-HIGHER FONTS 1
by Darrell & Ron Aldrich
Apple II+,IIe,IIc

HIGHER TEXT PLUS
Generate upper and lower case text in a variety of typefaces, sizes, and colors from your programs for display on the Apple Hires screen. Features an easy to use editor for generation of your own unique character sets (fonts), several utilities to enhance your creation of Hires displays, wide range of sample fonts, and full documentation. (Note: this program requires and assumes a full working knowledge of either Integer or Applesoft BASIC.)

HIGHER FONTS 1
Need extra character sets for Higher Text Plus, but don't wish to create them? Higher Fonts is a collection of over 25 different fonts or character sets for use with Higher Text Plus. Fonts vary from foreign and ancient language alphabets to special math and scientific symbols and game building characters. Use of fonts is demonstrated by several display programs.

PRODUCT CODE	SHTPP
A.P.P.L.E. PRICE	$ 28.50
SUG.RETAIL	$ 55.00
SHIP. WT.	6 OZ.

Maxwell's DEMON ™
by Duane Maxwell from Enhanceware™
Apple II,II+,IIe,IIc

NEW

This unique **machine code debugger** has learning aids for the novice programmer, yet it includes all the tools needed by the expert. Beginners find that the display of every memory cycle's effective address and data makes it easy to understand every instruction. Even the stack oriented commands and the complex addressing modes become easy to follow. The well organized screen displays all registers, cycle counts, and a listing (including symbols)of the five instructions surrounding the current Program Counter. Expert and novice alike appreciate the easy to use commands which allow you to:
* Single step or free run.
* Follow the effect of each instruction as it executes.
* Set breakpoints - EVEN IN ROM!
* View Text or Graphics screens.
* Modify any register or flag.
* Examine and modify memory.
* Simulate a Reset, NMI, or IRQ.
* Manipulate the Stack.
* Edit the symbol table.
* Execute Dos commands.
* Execute user code.
* Remap memory, freeing the program to run anywhere and to use any display screens.

IF IT DOSEN'T WORK - UNDO IT!
Usually when you detect a bug in a program, it's too late; the damage has been done. But with Maxwell's DEMON™ you can simply **UNEXECUTE** the last Instruction executed. In fact, **you can step backwards up to 16 Instructions!**
Unexecute doesn't just back up the Program Counter. **Everything that had been changed by the execution of the instruction(s) is restored to its original state!** Code can be executed, unexecuted and re-executed as many times as needed until the bug has been found and fixed.

Maxwell's DEMON™ also includes:
* A fully **symbolic** calculator, mini- assembler and lister.
* A mode for fast execution of previously debugged code.
* Symbolic operation with any object code - even in ROM.
* The ability to **breakpoint** on any desired combination of conditions; catch your program before it clobbers itself or the operating system - or before it jumps to the wrong address.
* A "help" command gives a description of each command.

A utility program is included which "grabs" the symbol table after an assembly with Big Mac.C or Merlin™ (ram card version). For use with other assemblers, or when only object code is available, the symbol table may be entered directly, or you can create your own symbol table grabber. Any symbol table may be saved to disk for later use.

The 110-page manual gives a very detailed description of each command, step-by-step procedures, many examples, tips on isolating certain bugs and entering patches, as well as other time saving techniques.

Maxwell's DEMON™ runs under standard Dos 3.3 on any Apple][,][+, //e, or //c with at least 48k and one disk drive. It supports all 6502 and 65c02 instructions. Source code is even available for hackers who want to make their own modifications.

PRODUCT CODE	SDEMON
A.P.P.L.E. PRICE	$ 35.00
SUG. RETAIL	$ 49.00
SHIP. WT.	1 LB.

MICROBE
from Synergistic Software
Apple II+,IIe

Take a journey through the blood stream of a human body and battle life threatening organisms and diseases while being careful not to injure the human host. A great science and learning arcade like adventure game from Synergistic Software.

PRODUCT CODE	SMIC
A.P.P.L.E. PRICE	$ 19.00
SUG.RETAIL	$ 44.95
SHIP. WT.	1 LB.

MICROWRITER IIe
By Bill Starbuck
Apple IIe,IIc

A semi-professional screen oriented word processor. Features 40 or 80 column edit modes, an 80 column preview if you edit in 40 columns, full IIe keyboard support, text insert, delete, move and replace, insert segments from disk, and save segments to disk. Generates standard text files. Printer drivers are included for Imagewriter, C.Itoh 8510A, Dynax DX-15, Epson FX-80, MX-80 w/Graftrax, Tally MT160,Tally Spirit-80, Nec 8023A, and Panasonic. Full instructions are included to generate additional printer drivers. This word processor is easy to use and will satisfy the requirements of 99% of the users. Requires an Apple IIe and one disk drive. Supports additional drives and most likely any printer or 80 column card. IIc compatible.

PRODUCT CODE	SMICWT
A.P.P.L.E. PRICE	$ 12.50
SUG.RETAIL	N/A
SHIP. WT.	2 OZ.

MICROWRITER II+
by Bill Starbuck
Apple II+

Same easy to use word processor for the Apple II+. Requires II+ with shift-key modification and a lower case chip. Compatible with Videx Videoterm and most other 80-column cards.

PRODUCT CODE	SUWTR+
A.P.P.L.E. PRICE	$ 12.50
SUG.RETAIL	N/A
SHIP. WT.	2 OZ.

Apple II SOFTWARE

MODEM MAGICIAN
by Gary B. Little
Apple II,II+,IIe,IIc

The first full featured, Intelligent terminal program to be published under the A.P.P.L.E CO-OP label. Modem Magician is a compre - hensive inter-computer data communications software system for the Apple II, II+, IIe, IIc and compatibles. It allows you to easily send and receive text by phone with remote computers, including services such as The Source and Compuserve, computer bulletin-boards, or other personal computers equipped with modems. Utilities are included to convert Applesoft, Machine Language, and Pascal files for transmission.Modem Magician works with most popular stand-alone modems and modem interface cards including the Apple Modem, Prometheus Promodem, Multitech Multimodem IIe, Hayes Micromodem, Hayes Smartmodem, Novation Apple-Cat II (300 baud), U.S. Robotics Password Modem, Signalman Mark XII, SSM Apple ModemCard, Apple Super Serial Card, Videx PSIO Card, CCS Model 7710A Card, and SSM ASIO Card. Features include:

- No word splitting when receiving text on the 40-column screen.
- Ability to enter all 128 ASCII characters from Apple II,II+ keyboards.
- Full support of all lower case adaptors for II and II+. Support of 80-column video displays: Videx Videoterm with softswitch, Apple IIe 80-column Text Card, Apple IIc.
- Built-in text editor, phone number editor and macro editor.
- Built in filing system allows you to easily save, load,delete and rename system text files.
- Supports two drive systems under ProDOS.
- Automatically saves incoming data to disk when memory buffer becomes full.
- AUTO-ANSWER mode allows you to leave computer unattended.
- Simultaneouus on-line printing when using most printer interface cards.
- XMODEM error-checking protocol for accurate transfer of ProDOS files.

PRODUCT CODE	SMODMA
A.P.P.L.E. PRICE	$ 38.00
SUG. RETAIL	$ 59.95
SHIP. WT.	1 LB.

MORTGAGES,DEPRECIATION, AND FINANCIAL CALCULATIONS
By Wayne Pratt, CCIM,
Apple II+,IIe,IIc

A first rate financial calculation program, MDFC provides a means to print out an amortization of loans involving as many as three mortgages. The financial portion finds internal rate of return, financial management rate of return, net present value, compound interest and discounting, discount a note and yield on a wrap-around note. The depreciation models allow either real estate or personal property to be depreciated. Methods include Pr-1981, straight line and accelerated. These programs will be of great value to homeowners and investors. Requires any Apple (Applesoft) and a disk drive. A printer is recommended.

PRODUCT CODE	SMORTG
A.P.P.L.E. PRICE	$ 12.50
SUG.RETAIL	N/A
SHIP. WT.	2 OZ.

MULTIVIEW SPREADSHEET DRIVER
from Checkmate Technology, Inc.

Get full power out of THE SPREADSHEET 2.0 and the Multiview 80/160 video card. This clever driver allows you to select all of the Multiview display modes simply by returning to the configuration menu. You can change display widths at any time without destroying your spreadsheet data.

PRODUCT CODE	SMSDRV
A.P.P.L.E. PRICE	$ 10.00
SUG.RETAIL	$ N/A
SHIP. WT.	4 OZ.

MUMMY'S CURSE
from Highlands Computer Services
Apple II+,IIe

Travel to ancient Eqypt and try to recover the solid gold death mask of King Ruttattut. Hi-Res adventure game has detailed color pictures, lots of mind challenging puzzles and many, many rooms. Watch out for the Mummy! The diskette is unprotected and you will able to study the internals of a professional adventure game.

PRODUCT CODE	SMCU
A.P.P.L.E. PRICE	$ 12.50
SUG.RETAIL	$ 30.00
SHIP. WT.	2 OZ.

OMNIS FOR THE APPLE II
from Blythe Software
64k Apple II+,IIe,IIc (See System Requirements)

For the person who has outgrown PFS, AppleWorks, Multitrieve, Volksfiler, or Apmail, this is a family of REAL database programs at a new attractive price.

OMNIS 2 KEY FEATURES INCLUDE:

- **GREAT FLEXIBILITY** Up to 12 user defined input screens per record.
- **DATABASE CAPACITY** Up to 120 fields per record, 75 characters per field. Define up to 10 indexed fields per record. Maximum number of records per file limited by disk space only. (Approx. 400 records per floppy when record length = 175 characters.)
- **DATA VALIDITY CHECKING** Eliminates invalid data entry into user defined fields.
- **PASSWORD PROTECTION** For the business environment you may define several levels of access to particular data fields and functions.
- **REPORT GENERATION** Specify up to 50 selection criteria for your reports with full implementation of logical AND/OR searches. Define up to 60 totalled and 60 calculated fields with up to 240 rows and columns per report. Report formats may be laid out up to 8 abreast with no special programming. Form letters and mailing labels become a breeze. Write reports to disk. Generate reports with subtotals based on multiple levels of an indexed field.

- **DATA IMPORT/EXPORT** DIF and ASCII file format.
- **DETAILED MANUAL** 400+ pages with basic and advanced tutorials.

OMNIS 3 KEY FEATURES INCLUDE:

- **RELATIONAL CAPABILITIES LINK INFORMATION FROM SEVERAL DIFFERENT FILES.**
- **DATABASE CAPACITIES** OMNIS 3 has the capability to handles up to 24 different files in one database, 12 of which can be open at one time, thus allowing the user to create records with up to 1440 fields per record. Data set size limited only by your disk capacity. See OMNIS 2 for other specifications.
- **DEFINE ENTIRE APPLICATIONS** using the screen oriented control of flow system. No programming languages to learn.
- **OMNIS 2 FILES ARE UPWARD COMPATIBLE WITH OMNIS 3** (Those that so choose can trade in their OMNIS 2 with all disks and manuals and receive a $50.00 credit towards OMNIS 3).
- **HARD DISK COMPATIBLE** Corvus, Ice,Space Coast Systems, CMC systems. (Sider support pending)
- **SYSTEM REQUIREMENTS**
  OMNIS 2 - 64k Apple II+, IIe, IIc with 2 drives or 128k Apple IIe with one drive and a hard disk.
  OMNIS 3 - 64k Apple II+, IIe, IIc with three drives or 128k Apple IIe with one drive and hard disk.

PRODUCT CODE	SO264	(OMNIS 2 64k)
A.P.P.L.E. PRICE	$ 100.00	
SUG.RETAIL	$ 195.00	
SHIP. WT.	3 LBS.	

PRODUCT CODE	SO2128	(OMNIS 2 128k)
A.P.P.L.E. PRICE	$ 100.00	
SUG.RETAIL	$ 195.00	
SHIP. WT.	3 LBS.	

PRODUCT CODE	SO364	(OMNIS 3 64k)
A.P.P.L.E. PRICE	$ 150.00	
SUG.RETAIL	$ 295.00	
SHIP. WT.	3 LBS.	

PRODUCT CODE	SO3128	(OMNIS 3 128k)
A.P.P.L.E. PRICE	$ 150.00	
SUG.RETAIL	$ 295.00	
SHIP. WT.	3 LBS.	

PLUS-WORKS-XM™
by Norwich DataServices
Apple II+,IIe

Apple II+ owners - the power of AppleWorks™ is at your command!

We are extremely excited to announce PLUS-WORKS-XM™. PLUS-WORKS Is a "patch" program which when run, modifies the Apple-Works™ Startup disk and allows "the rest of us" to enjoy AppleWorks on our Apple II's, II+, and Apple II look alikes!. PLUS-WORKS XM incorporates an extended memory feature which will recognize the A.P.P.L.E. BIG BOARD and most peripheral slot ram cards using 100% of memory to expand the AppleWorks Desktop up to ONE MEGA-BYTE! depending on the size of the ram board in use. With boards of 256k or larger you can utilize the ram disk feature which allows AppleWorks to reside entirely in memory!

Features Include:

- Easy to use one-time patch program modifies STARTUP program.
- All OPEN-APPLE commands handled on the II+ keyboard!
- DESKTOP space of up to 1 megabyte.
- Supports VIDEX compatible 80-column displays with inverse capability, also Smartterm 2, Wizard 80, and Vision 80.

We've tried it and we like it! (The original ad copy was written on an Apple II+, with AppleWorks and a 1 megabyte A.P.P.L.E. BIG BOARD - available Desktop space = 1016k!).

PRODUCT CODE	SPLUSW
A.P.P.L.E. PRICE	$ 39.00
SUG. RETAIL	$ 49.95
SHIP. WT.	12 OZ.

PLUS-WORKS-XMP™
By Norwich Data Services
Apple II+, Ace 1000, Ace 1200

Same as the PLUS-WORKS-XM but recognizes the 64K of the PCPI (Starcard) ,ALS enhanced CP/M boards, Franklin 64k CP/M boards. Requires one of these cards. Does not use memory on other types of memory cards.

PRODUCT CODE	SPLUSP
A.P.P.L.E. PRICE	$ 39.00
SUG. RETAIL	$ 49.95
SHIP. WT.	12 OZ.

ProCOMMAND - The Commander
by Glen Bredon
Apple II,II+,IIe,IIc (64k required)

From the author who gave us BIG.MAC.C, now comes ProCOMMAND. This package is a set of ProDOS utilities and NEW ProDOS commands that greatly increase the power and flexibility of the ProDOS operating system. Those who have used the ProDOS "FILER" know the agony of having to enter (one by one!) the pathnames of the files choosen to copy. Nomore! Included on the ProCOMMAND disk is the file utility "FITE" which allows for BATCH PROCESSING (copy, lock, unlock, and delete) of selected ProDOS files. ProCOMMAND adds 25 new POWERFUL Applesoft and Dos commands to the ProDOS Basic.System. The list of new commands includes:

APPLESOFT
- **POINTERS** - Lists the current values of seven important Applesoft pointers.
- **VARLST** - Lists all currently active variables.
- **VARTRC** - Trace the current value of a selected variable.
- **XREF#** - Shows what variables are being used and where in your
  program.
- **DUMP** - Hex/Ascii memory dump or ANY ProDOS file including directories.
- **SORT** - Sorts single or multi-demensioned arrays on multiple fields.

Apple II SOFTWARE

- **EDIT**- Provides a full featured, global Applesoft BASIC program editor.
- **AUTO** - Provides automatic line numbering for Applesoft programs.
- **RENUMBER** - Renumbers your Applesoft programs.
- **HOLD/MERGE** -Adds one Applesoft program to another.
- **LYST** - Produces a formatted listing of the program in memory.
- **USING** - Will output data in the format of your choice.
- **MACRO** - Invokes a set of keyboard macros used with EDIT.

ProDOS

- **ONLINE** - Looks at all online drives and prints names of all volumes found.
- **TYPE** - Dumps ProDOS TXT files.
- **FIND/FIND$** - Searches disk files of any type for specified character or HEX string.
- **COPY** - Copies file PATHNAME1 to file PATHNAME2.

Also included are commands to conveniently handle plotting, animation, color fills, character generation, and mouse/cursor movement on the IIc/IIe double hi-res screen.

PRODUCT CODE	SPROCO
A.P.P.L.E. PRICE	$ 35.00
SUG. RETAIL	$ 59.95
SHIP. WT.	1 LB.

PROZAP
by Gary Charpentier
Apple II+,IIe,IIc

A new utility uses intrinsic ProDOS routines to read, edit and write any ProDOS block or DOS 3.3 sector all from the ProDoS environment. The disk also contains a utility for dump to disk, printer or monitor, a hex or hex/ASCII listing or disassembly with a search routine for hex or ASCII bytes. Complete with documentation for ProZap only, not ProDos.

PRODUCT CODE	SPZAP
A.P.P.L.E. PRICE	$ 25.00
SUG. RETAIL	N/A
SHIP. WT.	3 OZ.

SCRAMBLER
By Jerry Jongerius
Apple II+,IIe

A disk utility to scan a disk for errors and to copy protect your personal software. Each sector of a disk is checked, bad sectors are marked on the screen. Copy protection can be applied to your disk and for added protection you can add a password. Data disks can also be created. This program is of use in the classroom, at school, or might be used in the home to separate family software. Requires an Apple][+ or IIe with one disk drive. A second drive and a printer are optional.

PRODUCT CODE	SSCRAM
A.P.P.L.E. PRICE	$ 12.50
SUG. RETAIL	N/A
SHIP. WT.	2 OZ.

SPELLWORKS™
from Advanced Logic Systems

Finally, a spelling checker and mail merge program for AppleWorks. **Written exclusively for AppleWorks™**, SpellWorks makes typing and spelling errors a thing of the past!
Merges AppleWorks Data Base files with Apple Works WordProcessor files to generate form letters quickly and easily. Spell checks documents at 10 words per second. Allows you to create Custom Dictionaries containg your own words. Plus Word Count, all on one disk!

PRODUCT CODE	SSW
A.P.P.L.E. PRICE	$ 39.00
SUG. RETAIL	$ 49.95
SHIP. WT.	2 OZ.

SSD PASCAL 1.2 DRIVER
by Bruce Van Norman

Solid State Disk (Flashcard) Pascal 1.2 Driver. This software lets Pascal 1.2 users take advantage of the speed inherent in the SSD memory-based disk drive emulator.

PRODUCT CODE	SPAS
A.P.P.L.E. PRICE	$ 20.00
SUG. RETAIL	$ 79.00
SHIP. WT.	2 OZ.

THE FONT ALBUM
by Andrew Wicker
Apple II+,IIe,IIc

Here is a brand new set of over forty fonts for use with Higher Text. Find just the one for the program you are writing. You'll find a wide variety of thin, thick, slanted, shadowed, and stylized typefaces. There is even one patterned after that voracious little arcade game character who has consumed so many quarters! Some fonts include special shapes, creatures, tanks, and other objects that can be used for programming character graphics in creating games.

PRODUCT CODE	SFTALB
A.P.P.L.E. PRICE	$ 12.50
SUG. RETAIL	$ 20.00
SHIP. WT.	2 OZ.

THE SCHOOLHOUSE GRADER
By Jim Campbell
Apple II+,IIe,IIc

A teachers record book, a class roster and a record of grades, assignments and attendance, as well as statistics are provided. This uncomplicated program should be of great value to teachers who wish to try using a computer for record keeping. Requires any Apple with 48K and one disk drive. A second drive and a printer are recommended.

PRODUCT CODE	SGRADE
A.P.P.L.E. PRICE	$12.50
SUG. RETAIL	N/A
SHIP. WT.	2 OZ.

THE Spreadsheet Version 2.0 (unprotected)
Apple II+,IIe,IIc

THE Spreadsheet Version 2.0 is a "new generation" spreadsheet calculator program with all the basic features necessary for creation of complicated models, and many advanced features too. THE Spreadsheet Version 2.0 supports:

- Most popular 80 column boards.
- Optional seventy column software display.
- All "language card" compatible RAM cards and //e extended memory cards(up to 512K).
- Supports full upper and lower case from any Apple computer. (Needs lower case chip/shift key mod. on II,II+)
- Variable column widths.
- Protected cells, hidden cells, and other advanced features.
- Field to field tabbing, for easy data entry.
- Hard disk compatibility.

PRODUCT CODE	STSS
A.P.P.L.E. PRICE	$ 65.00
SUG. RETAIL	$ 149.95
SHIP. WT.	2 LBS.

TURTLESOFT
By Robert W. Gallup
Apple II+,IIe

A new graphics program requiring little knowledge of Apple graphics. Program has great educational potential. All commands are accessed through the Ampersand vector. Now you can use commands like: & "DRAW", & "LEFT"5, & "FORWARD"10, etc. to create procedures that will draw geometric figures on your screen based on LOGO and the famed Turtlegraphics. Comes with a soundroutine, collison detection, split screen graphics and macrodefinitons. Enjoy some of the features of LOGO from the comfort of your own BASIC.

PRODUCT CODE	STUR
A.P.P.L.E. PRICE	$22.50
SUG. RETAIL	$149.95
SHIP. WT.	4 oz.

U-BOAT COMMAND
from Synergistic Software
Apple II+,IIe,IIc

You are the commander of a submarine in search of a heavily defended enemy aircraft carrier and it's making a break for neutral waters. Watch the sonar scope, air supply, fuel... DEPTH CHARGES! ...steady ...steady ...FIRE ONE! Arcade style strategic war game.

PRODUCT CODE	SUBCOM
A.P.P.L.E. PRICE	$12.50
SUG. RETAIL	$29.95
SHIP. WT.	4 OZ.

VOLKSFILER
by Glen Hausler
Apple II+,IIe,IIc

VOLKSFILER is a freeform electronic card file program where each "card" is represented by your Apple screen. You may enter information wherever you want it on the screen. When you recall the information later, it will appear exactly as you entered it. Information can be sent to your printer if you choose.The first word on each screen is used as a sort key. The fast search command automatically scans the entire contents of every screen for the word you want. Automatic data compression assures efficient use of disk storage. VOLKSFILER is easily mastered and is best suited for informal "index-card" type applications and other jobs where a conventional database structure would be too restrictive.

PRODUCT CODE	SVOLKS
A.P.P.L.E. PRICE	$ 12.50
SUG. RETAIL	$ 39.95
SHIP. WT.	2 OZ.

ZAPT
By Andy Tuxen
Apple II+,IIe,IIc

A disk utility for altering data on a DOS 3.2, 3.3 or PASCAL disk. With this utility you can change catalog entries, recover deleted files, delete DOS, make modifications to binary programs, and correct corrupted files. In short, you can read or write any byte on a disk. This program is for those who want to learn and for those who have always wanted a (another) ZAP program. As is our policy, this is another well documented and easy-to-use program. Requires any Apple and one disk drive.

PRODUCT CODE	SZAPT
A.P.P.L.E. PRICE	$ 12.50
SUG. RETAIL	N/A
SHIP. WT.	2 OZ.

Apple II SOFTWARE

ZARDAX 6.0
from Computer Solutions
Apple II,II+,IIe,IIc

NEW FEATURES! NEW LOW PRICE! Zardax, our best word processor program, is now copy-able. Making backups and installing Zardax on hard disks is a breeze. We like supporting Zardax so well, we can guarantee that it will configure to your system. Simple menu selection for your printer (over 57 varieties supported), interface card, and kind of video display. Zardax Keyboard connector (HZARKY) required for use with Apple II, II+.

PRODUCT CODE	SZARII (II,II+,IIe,IIc)
A.P.P.L.E. PRICE	$ 99.00
SUG. RETAIL	$ 210.00
SHIP. WT.	2 lbs.

ZARDAX KEYBOARD CONNECTOR

PRODUCT CODE	HZARKY
A.P.P.L.E. PRICE	$ 7.00
SUG. RETAIL	N/A
SHIP. WT.	5 OZ.

ANTHOLOGY VOLUMES

Each disk contains the all the programs found between the pages of Call -A.P.P.L.E. magazine for a six month period, unless otherwise indicated (see below). Great way to obtain terrific programs and utilities without the bother and worry of typing them in correctly. Consult the individual issues or Peeking Compendiums for program documentation as these disks are not stand-alones.

VOLUME		PRODUCT CODE
VOL 1	(Jan - Jun '79)	(SA1)
VOL 2	(Jul - Dec '79)	(SA2)
VOL 3	(Jan - Jun '80)	(SA3)
VOL 4	(Jul - Dec '80)	(SA4)
VOL 5	(Jan - Jun '81)	(SA5)
VOL 6	(Jul - Dec '81)	(SA6)
VOL 7	(Jan - Jun '82)	(SA7)
VOL 8	(Jul - Dec '82)	(SA8)
VOL 9a	(Jan - Mar '83)	(SA9A)
VOL 9b	(Apr - Jun '83)	(SA9B)
VOL 10a	(Jul - Sep '83)	(SA10A)
VOL 10b	(Oct - Dec '83)	(SA10B)
VOL 11a	(Jan - Mar '84)	(SA11A)
VOL 11b	(Apr - Jun '84)	(SA11B)
PASCAL 81	(Jan - Dec '81)	(SPA1)

A.P.P.L.E. PRICE	12.50
SUG. RETAIL	N/A
SHIP.WT.	1 OZ.

Call - A.P.P.L.E. IN DEPTH DISKETTES

Diskettes containing all programs published in Call - A.P.P.L.E. IN DEPTHs:

ALL ABOUT APPLESOFT DISKETTES

PRODUCT CODE	SIN1
A.P.P.L.E. PRICE	$ 16.00
SUG. RETAIL	N/A
SHIP. WT.	1 OZ.

ALL ABOUT PASCAL DISKETTES

PRODUCT CODE	SIN2
A.P.P.L.E. PRICE	$ 20.00
SUG. RETAIL	N/A
SHIP. WT.	3 OZ.

ALL ABOUT DOS DISKETTES

PRODUCT CODE	SIN3
A.P.P.L.E. PRICE	$ 15.00
SUG. RETAIL	N/A
SHIP. WT.	2 OZ.

ELECTRONIC ARTS™

ARCHON II:
ADEPT

MURDER ON
THE ZINDERNE UF

ADVENTURE CONSTRUCTION SET
Apple II,II+,IIe,IIc
The most powerful graphic adventure generator.
• Maximum adventure size: 240 rooms, 500 creatures, 7500 props.
• 500 existing creatures and props.
• 30 sound effects, 13 magic spells.
• Pixel editor for drawing new graphics.
• "Finish" option completes design automatically.
• Supports AppleMouse, Mockingboard, and Cricket.

PRODUCT CODE	SADCOM
A.P.P.L.E. PRICE	$34.00
SHIP. WT.	6 OZ.

ARCHON II : ADEPT
Apple II,II+,IIe,IIc
The unique Archon game system with new piecea and more strategy than the origional Archon.
• Dungeon type pieces like sorcerers, gorgons, and wraiths.
• Handicapping system.
• For one or two players.
• "Best Strategy Arcade game"- *Family Computing.*

PRODUCT CODE	SARCON
A.P.P.L.E. PRICE	$27.00
SHIP. WT.	6 OZ.

AUTO DUEL
Apple II,II+,IIe,IIc
The first fast-action strategy role-playing game with cars. Instead of building up warriors and magic users, you build hot cars. Set in the future, where the right-of way goes to the driver with the biggest guns!
• Baised on *Car Wars* by Steve Jackson
• from **Origin Systems**
• Such a classic it even has its own magazine.

PRODUCT CODE	S2AUTO
A.P.P.L.E. PRICE	$34.00
SHIP. WT.	8 OZ.

CARRIERS AT WAR
Apple II+,IIe,IIc
The most accurate WW II strategy game of the Pacific.
• 7 built-in secenaros from Pearl Harbor to Coral Sea
• Accuracy of military forces, geography, battle conditions and weather.
• Maps and aid cards included.
• "Best War Game of 1984" - *Computer Gaming World.*
• from **Strategic Studies**

PRODUCT CODE	SCRAWA
A.P.P.L.E. PRICE	$35.00
SHIP. WT.	1 LB.

Dr J & Larry Bird go ONE ON ONE
Apple II,II+,IIe,IIc
The number one sports simulation of all time. This program gives you the intoxicating feeling of actually getting to play one of these basketball superstars. You get to take all the skilla and characteristics of either Bird or the Doctor- all there special moves, their shooting abilities, their rebound akills, their strength stammia and speed. What happens when you get two all-stars like these together, and get them to help you design a software game ? You get "Game of the Year" and 5 other awards, and a smash best-seller.

PRODUCT CODE	S2ONE
A.P.P.L.E. PRICE	$27.00
SHIP. WT.	6 OZ.

EUROPE ABLAZE
Apple II,II+,IIe,IIc
The air war over England and Germany 1939-45. You can take the role of Commander of the Air Force, or any of five subordinate poaitions on either side.
• From 1 to 12 players!
• You can plan the missions. Bombing, Fighter, Patrol,
  or Raiding.
• Fight the Battle of Britain and two other scenarios or design your own battles.
• Includes 24 aircraft types, 255 squadrons,127 airbases, 63 radar stations, and much more.
• From **Strategic Studies Group**

| PRODUCT CODE	S2BLAZ
A.P.P.L.E. PRICE	$35.00
SHIP. WT.	6 OZ.

FINANCIAL COOKBOOK
Apple II,II+,IIe,IIc
Sophisticated but easy -to-use home finacial calculator. Offers 32 recipea covering the most frequently asked questions on:
• Taxes and tax shelters.
• Lease vs. buy.
• Amoritization schedules.
• Auto and home financing.
• Inflation.
• Investments, savings, amd IRA accounts.
• Superb documention.

PRODUCT CODE	SFINCB
A.P.P.L.E. PRICE	$34.00
SHIP. WT.	6 OZ.
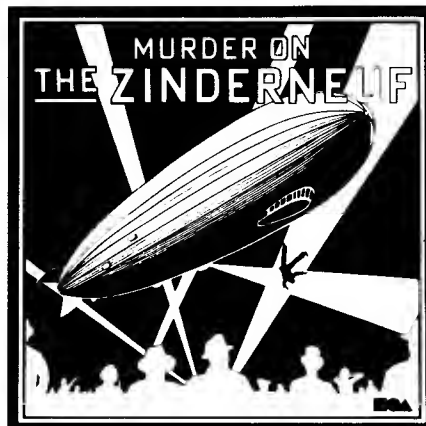
MOEBIUS- The Orb of Celestial Harmony
Apple II,II+,IIe,IIc
From the creators of Ultima comes a new dimension in fantisy role-playing gamea. Moebius is a danger filled adventure through a complex and colorful Oriental world of magic, mysticism, and intregue.
• Action-arcade duels in 3-D hires graphics.
• Interaction between magic and character moves.
• from **Origin Systems**

PRODUCT CODE	S2MOEB
A.P.P.L.E. PRICE	$38.00
SHIP. WT.	8 OZ.

MOVIE MAKER
Apple II,II+,IIe,IIc
Create your own animated moviea that look like they were done by professional animators. Ten built-in movies act as tutorials to help you quickly master the art of amimation. You can animate your own drawings or use the hundreds of built in pictures.
• Includes 3 hillarious Gahan Wilson cartoon movies.
• Record your creations on disk or onto your VCR.
• Built in sound library for apecial effects to your movies.
• New kind of Creativity Software for your Apple.

PRODUCT CODE	S2MOVI
A.P.P.L.E. PRICE	$27.00
SHIP. WT.	8 OZ.

MURDER ON THE ZINDERNEUF
Apple II,II+,IIe,IIc
A graphic mystery adventure. There's been a murder on the luxury dirigible, Zinderneuf. If you don't find the killer before you land in New York, you'll lose your reputation as a world famous detective. Search their rooms, question them, watch them. Then make the killer confess.
• Over 2000 scenarios, chosen at random.
• Choice of eight detective characters.
• Easy to play, no text input. Menu driven with joystick.
• Average playing time 35 minutes.
• The lowest price of the Electronic Arts Products.

PRODUCT CODE	S2MURD
A.P.P.L.E. PRICE	$15.00
SHWT. WT.	6 OZ.

Music Construction Set
Apple II,II+,IIe,IIc

The best selling home music software product of all time. An easy powerful music composer. Pick a note, whole note through sixteenth, place it on the staff, and hear it play. Imagine a record album you could actually enter, rewrite, and then play back- all in seconds. Imagine that in addition to the music on it , you could use it to write songs of your own.

The music on the disk ranges from rock and roll to ragtime, nursery rimes to baroque. It's fun to play, and even more fun to change. Throw in a few flats. Change the key. Change the whole ending. Reach across the centuries and tweek the nose of Mozart. From professional composers to children, this is a great way to learn about music. And a great way to have fun with what you already know.

PRODUCT CODE	S2MCS
A.P.P.L.E. PRICE	$27.00
SHIP. WT.	6 OZ.

PINBALL CONSTRUCTION SET
by Bill Budge
Apple II,II+,IIe,IIc

Create your own video pinball games. In a class by itself. The most award winning home software product in history. It's been called the best program ever written for an 8-bit machine. Pure sheer unadulterated power to create the pinball games of your dreams, save them and show them off. **The all time classic.**

PRODUCT CODE	SPBCS
A.P.P.L.E. PRICE	$25.00
SHIP. WT.	6 OZ.

REACH FOR THE STARS
Apple II,II+,IIe,IIc

The most strategically challenging Sci-fi game ever.
• Conquer the galaxies:54 star systems, 100+ planets.
• Manage population, environment, economy, space
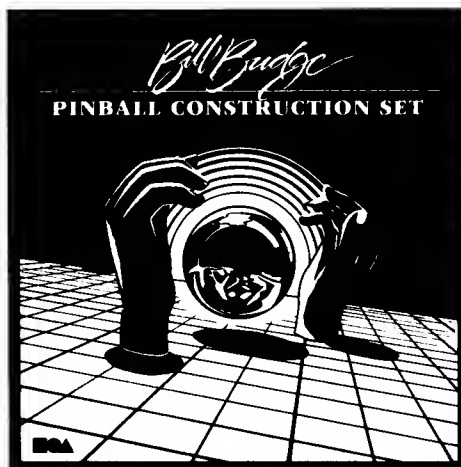 fleet design and production, and war operations.
• Galactic maps and data cards included.
• from **Strategic Studies Group**
• "Best science fiction game for the thinking person"-
  Science Digest.

PRODUCT CODE	SRFSTR
A.P.P.L.E. PRICE	$31.00
SHIP. WT.	6 OZ.

ELECTRONIC ARTS™

The SEVEN CITIES of GOLD

SEVEN CITIES OF GOLD
Apple II,II+,IIe,IIc

An exploration and resource management game about the Spanish Conquistadors.
• Historically and Geography accurate.
• Captures Conquisatdors's problems of supplies, navigation, communication, and native interaction.
• Automatic computer mapping.
• Random continent generator creates infinite new world scenarios.
• 3 program of the year awards.

PRODUCT CODE	S7COG
A.P.P.L.E. PRICE	$27.00
SHIP. WT.	6 OZ.

SKYFOX
Apple II,II+,IIe,IIc

A action strategy game of flying and fighting to protect your homebase.
• Breathtaking graphics and high speed animation.
• 15 sceneraros and 5 levels of difficulty.
• Air to ground tank combat and air to air jet dog fights.
• Working gages and on-board computer.
• Supports mockingboard and Cricket.
• "Best Arcade/Shoot-em-up" - *Family Computing*

PRODUCT CODE	SSKYFX
A.P.P.L.E. PRICE	$27.00
SHIP. WT.	6 OZ.

THE BARD'S TALE
Apple II,II+,IIe,IIc

Fans of Wizardy and Ultima, get ready. The Bard's Tale is the best fantasy role-playing adventure game of all time. Bigger ,faster, deeper, and smarter than any game of its kind. Set in a city of Scara Brae , it includes 16 maze levels in 3-D color. So vast are the characters, spells, and monsters it takes up two disks. With its unprecedented depth and greater emphasis on strategy, The Bard's Tale is the new standard against which all other fantasy games must be measuerd.

PRODUCT CODE	S2BARD
A.P.P.L.E. PRICE	$31.00
SHIP. WT.	6 OZ.

Ultima III - EXODUS
Apple II,II+,IIe,IIC

The epic fantasy role-playing masterpiece by Lord British. Over 90 weeks on the best seller charts.
• Select from a 20 character roster, with individal player movement.
• Many weapons, armor, and magic spells.
• Full color with advanced dungeon graphics.
• Adventure - style verb entry.
• from **Origin Systeme**

PRODUCT CODE	S2UL3
A.P.P.L.E. PRICE	$41.00
SHIP. WT.	1 LB.

ULTIMA IV - The Quest of the Avatar
Apple II,II+,IIe,IIc

The long awaited sequel to Ultima III. Sixteen times larger than any game in the series. Familiar Ultima interior and surface graphics, with much bigger status and transaction screens. A new story line in a new world. Includes ruins and other kinds of places to visit. New kinds of spells. Better combat sequences. New kinds of monsters. Better animation.

PRODUCT CODE	S2UL4
A.P.P.L.E. PRICE	$41.00
SHIP. WT.	1 LB.

WILDERNESS
Apple II,II+,IIe,IIc

A survival training simulation in the Sierra Navada mountains.
• 3-D color graphics with 360 degree first person scanning.
• Scientifically accurate simulation of native plants and animals, human physiological response, weather and topographical mapping.
• Two survival senarios and "research mode."
• Editor for custom weather conditions, time of year and topography.
• A unique kind of computer application.

PRODUCT CODE	SW!LDE
A.P.P.L.E. PRICE	$35.00
SHIP. WT.	12 OZ.

PUBLIC DOMAIN SOFTWARE
APPLE II (Each disk Vol)

A variety of programs at a low cost of 15 to 25 cents per program! Disks contain everything from demos/games disk and printer utilities ,tutorials, business and inventory programs to Pascal and C/PM. Below is a complete list of our PDS library or, send a .56 cent, stamped self-addressed envelope for a listing of all programs on each volume.

You may order a catalog of titles on each volume for $1.00.

Please specify volume number when ordering.

VOLUME	TYP	DESCRIPTON
PDS-000	INT	APPLE TUTOR
PDS-001	MIX	APPLE TUTOR
PDS-003	AFP	APPLE TUTOR
PDS-005	MIX	HIGHER TEXT UTILITIES
PDS-006	AFP	POLICE - DATA/PLAN
PDS-008	INT	ART & GRAPHICS
PDS-009	INT	ART & GRAPHICS
PDS-010	AFP	ART & GRAPHICS
PDS-011	INT	ART & GRAPHICS
PDS-012	AFP	ART & GRAPHICS
PDS-013	MIX	ART & GRAPHICS
PDS-015	INT	ART & GRAPHICS
PDS-016	AFP	ART & GRAPHICS
PDS-017	INT	ART & GRAPHICS
PDS-028	AFP	ASTRONOMY
PDS-029	AFP	ASTRONOMY
PDS-034	AFP	AVIATION
PDS-036	AFP	AVIATION
PDS-042	AFP	BUSINESS & FINANCE
PDS-043	AFP	BUSINESS & FINANCE
PDS-044	AFP	BUSINESS & FINANCE
PDS-045	AFP	BUSINESS & FINANCE
PDS-046	ÁFP	BUSINESS & FINANCE
PDS-047	AFP	BUSINESS & FINANCE
PDS-048	AFP	BUSINESS & FINANCE
PDS-060	MIX	CHEMISTRY & BIOLOGY
PDS-066	MIX	EDUCATION & SCHOOL
PDS-067	AFP	EDUCATION & SCHOOL
PDS-068	AFP	HANDICAP APPLICATIONS
PDS-069	AFP	HANDICAP APPLICATIONS
PDS-070	AFP	HANDICAP APPLICATIONS
PDS-074	MIX	MORSE CODE
PDS-075	MIX	MODEM
PDS-076	AFP	ELECTRONICS & RADIO
PDS-077	AFP	ELECTRONICS & RADIO
PDS-078	AFP	ELECTRONICS & RADIO
PDS-079	INT	ELECTRONICS & RADIO
PDS-092	AFP	FOOD
PDS-100	AFP	GAMES

PDS-101	INT	GAMES
PDS-102	AFP	GAMES
PDS-103	INT	GAMES
PDS-104	AFP	GAMES
PDS-105	INT	GAMES
PDS-106	AFP	GAMES
PDS-107	AFP	GAMES
PDS-108	AFP	GAMES
PDS-109	INT	GAMES
PDS-110	INT	GAMES
PDS-111	INT	GAMES
PDS-112	INT	GAMES
PDS-113	INT	GAMES
PDS-114	INT	GAMES
PDS-115	INT	GAMES
PDS-116	AFP	GAMES
PDS-117	INT	GAMES
PDS-118	AFP	GAMES
PDS-119	INT	GAMES
PDS-120	AFP	GAMES
PDS-140	INT	ADVENTURE GAME
PDS-141	AFP	ADVENTURE GAME
PDS-142	AFP	ADVENTURE GAME
PDS-143	AFP	ADVENTURE GAME
PDS-166	AFP	HELLO & MENU PROGRAMS
PDS-167	INT	HELLO & MENU PROGRAMS
PDS-172	AFP	MATH & STATISTICS
PDS-173	INT	MATH & STATISTICS
PDS-174	AFP	MATH & STATISTICS
PDS-175	INT	MATH & STATISTICS
PDS-176	AFP	MATH & STATISTICS
PDS-182	INT	MUSIC & SOUND
PDS-183	MIX	MUSIC & SOUND
PDS-185	INT	MUSIC-MAESTRO
PDS-196	AFP	MISCELLANEOUS
PDS-197	INT	MISCELLANEOUS
PDS-198	MIX	MISCELLANEOUS
PDS-199	INT	MISCELLANEOUS
PDS-200	AFP	MISCELLANEOUS
PDS-201	MIX	MISCELLANEOUS
PDS-210	AFP	MISCELLANEOUS
PDS-214	AFP	UTILITIES
PDS-215	INT	UTILITIES
PDS-216	AFP	UTILITIES
PDS-217	AFP	UTILITIES
PDS-218	INT	UTILITIES
PDS-219	INT	UTILITIES
PDS-220	AFP	UTILITIES
PDS-221	INT	UTILITIES
PDS-222	AFP	UTILITIES
PDS-223	INT	UTILITIES
PDS-224	AFP	UTILITIES
PDS-225	INT	UTILITIES
PDS-226	MIX	UTILITIES
PDS-227	AFP	EPSON UTILITIES
PDS-228	AFP	EPSON GR DUMP
PDS-229	MIX	UTILITIES

PSS-230	AFP	PROWRITER FONTS
PDS-253	INT	APPLE SOFTWARE BANK
PDS-254	MIX	APPLE SOFTWARE BANK
PDS-255	MIX	APPLE SOFTWARE BANK
PDS-501	FOR	FORTH LANGUAGE DEMO

PASCAL

PAS-001	PAS	MISCELLANEOUS
PAS-002	PAS	MISCELLANEOUS
PAS-003	PAS	MISCELLANEOUS
PAS-004	PAS	MISCELLANEOUS
PAS-005	PAS	MISCELLANEOUS
PAS-006	PAS	ATTACH.BIOS
PAS-007	PAS	MISCELLANEOUS
PAS-008	PAS	MISCELLANEOUS
PAS-009	PAS	MISCELLANEOUS
PAS-010	PAS	MISCELLANEOUS
PAS-011	PAS	MISCELLANEOUS
PAS-012	PAS	PAYROLL/LEDGER

(PDS LISTING cont.)

INTERNATIONAL APPLE CORE

IAC-002	MIX	MISCELLANEOUS
IAC-003	INT	GAMES
IAC-005	MIX	ART & GRAPHICS
IAC-007	AFP	UTILITIES
IAC-008	MIX	GAMES
IAC-009	MIX	MATH & CONVERSION
IAC-010	AFP	ART & GRAPHICS
IAC-012	MIX	UTILITIES
IAC-013	AFP	UTILITIES
IAC-014	AFP	MICRO MODEM UTILTIES
IAC-015	MIX	MISCELLANEOUS
IAC-016	AFP	MISCELLANEOUS
IAC-017	INT	GAMES
IAC-018	AFP	UTILITIES & SOUND
IAC-019	AFP	UTILITIES
IAC-020	AFP	UTILITIES
IAC-21A	AFP	BULLETIN BOARD PART1
AC-21B	AFP	BULLETIN BOARD PART2
IAC-022	AFP	VISICALC UTILITIES
IAC-027	AFP	UTILITIES
IAC-029	AFP	BINARY UTILITY GRAPHICS
IAC-30A	AFP	ED'S PLOT PACKAGE PART1
IAC-30B	AFP	ED'S PLOT PACKAGE PART2

CP/M

CPM-01A	CPM	UTILITIES
CPM-01B	CPM	UTILITIES
CPM-51A	CPM	MACRO PROCESSOR PART1
CPM-51B	CPM	MACRO PROCESSOR PART2
CPM-60A	CPM	DIAGNOSTICS
CPM-60B	CPM	DIAGNOSTICS
CPM-61A	CPM	MISCELLANEOUS
CPM-61B	CPM	MISCELLANEOUS
CPM-66A	CPM	ASSORTED HELP FILES
CPM-66B	CPM	ASSORTED HELP FILES
CPM-76A	CPM	MISCELLANEOUS
CPM-76B	CPM	MISCELLANEOUS
CPM-83A	CPM	MATH
CPM-83B	CPM	MATH
CPM-84A	CPM	MODEM PROGRAMS
CPM-84B	CPM	MODEM UTILITIES
CPM-85A	CPM	MODEM UTILITIES
CPM-85B	CPM	MODEM UTILITIES
CPM-86A	CPM	MODEM UTILITIES
CPM-87A	CPM	UTILITIES

PRODUCT CODE	SPDS
A.P.P.L.E. PRICE	$5.00
SUG. RETAIL	N/A
SHIP. WT.	1 OZ. ea. disk.

EAMON ADVENTURE VOLUMES

An adventure game that takes you back to the days of sorcerers and magic. Encounter various obstacles requiring different responses depending on your character. Great fun for the wise. (You will need the Beginner's Cave in order to run any of the other Eamon Adventures.)

Eamon	0	- Dungeon Designer Eamon
Eamon	1	- The Beginner's Cave
Eamon	2	- Lair of the Minotaur
Eamon	3	- Cave of the Mind
Eamon	4	- Zyphur River Venture
Eamon	5	- Castle of Doom
Eamon	6	- Death Star
Eamon	7	- Devil's Tomb
Eamon	8	- Abductor's Quarters
Eamon	9	- Assault on the Clone Masters
Eamon	10	- Magic Kingdom
Eamon	11	- Molinar's Tomb
Eamon	12	- The Quest for Trezore
Eamon	13	- Lost Island of Apple
Eamon	14	- The Underground City
Eamon	15	- The Caves of Treasure Island
Eamon	16	- Furioso
Eamon	17	- Merlin's Castle
Eamon	18	- Hogarth Castle
Eamon	19	- Death Trap
Eamon	20	- The Black Death
Eamon	21	- Improved Dungeon Designer
Eamon	22	- The Senator's Chambers
Eamon	23	- TheTemple of Ngurct

Eamon	24	- Black Mountain
Eamon	25	- Nuclear Nightmare
Eamon	26	- Assault on the Mole Man
Eamon	27	- Revenge of the Mole Man
Eamon	28	- The Gauntlet
Eamon	29	- The Caves of Mondamen
Eamon	30	- Heros Castle
Eamon	31	- The Tower of London
Eamon	32	- The Feast of Carroll
Eamon	33	- The Master's Dungeon
Eamon	34	- Crystal Mountain
Eamon	35	- The Lost Adventure
Eamon	36	- The Manxome Foe
Eamon	37	- Behind the Sealed Door
Eamon	38	- The Land of Death
Eamon	39	- The Jungles of Vietnam
Eamon	40	- The Black Castle of Nagog
Eamon	41	- The Sewers of Chicago
Eamon	42	- Caverns of Doom
Eamon	43	- Valkenburg Castle
Eamon	44	- Modern Problems

PRODUCT CODE	**SEAMON**
A.P.P.L.E.PRICE	$5.00 / DISK or $25.00 / 10 DISKS
SUG.RETAIL	N/A
SHIP.WT.	1 OZ. PER DISK

Macintosh Software

AIRBORNE
from Silicon Beach Software

Armed only with an anti-aircraft gun and mortar, you alone defend your feeble position on the beach from relentless waves of enemy paratroopers, tanks, and screaming fighter jets armed with deadly accurate air to ground guided missiles. ACTION PACKED from the word go with realistic sound effects featuring actual recorded sounds, the only question is: How long can you hold them off? Mac animation at its best.

PRODUCT CODE	**SMCAIR**
A.P.P.L.E. PRICE	$26.25
SUG. RETAIL	$34.95
SHIP. WT.	8 OZ.

CLICKART: EFFECTS
from T/Maker Graphics Company

ClickArt: Effects is a MacPaint desk accessory that allows you to rotate, slant, distort, or add perspective to a selected image. Rotate an image 360 degrees in one degree increments, slant it right, left up, or down; distort an image by pulling one or more edges away from the center. All functions are available from the Accessories menu while you are using MacPaint.

PRODUCT CODE	**SMCEFC**
A.P.P.L.E. PRICE	$37.50
SUG. RETAIL	$49.95
SHIP. WT.	8 OZ.

COPY][MAC
from Central Point Software

Every bit as good as the Apple II version, COPY II MAC offers a very strong bit copy program for backing up protected software and a useful set of disk utilities.

- Sector Copy
- Copy protect/Unprotect
- Make files visible/invisible
- Undelete files
- Sector/file editor
- Copy files/disk
- Format/verify disks

PRODUCT CODE	**SMCCPY**
A.P.P.L.E. PRICE	$25.00
SUG. RETAIL	$39.95
SHIP. WT.	14 OZ.

MACBOOSTER
from Mainstay

Put an end to the watch icon blues! MacBooster aids the Macintosh File Manager by continuously monitoring disk access. Those files that are accessed most frequently are stored in a cache or memory buffer. Each time the Mac needs to go to disk, it first checks the cache to see if the needed information has been requested before. If it has, the data will already be in memory and the information can be utilized immediately. If not, the data will be added to the cache where it will be readily available the next time it is needed. Easy to use. Requires 512k Mac.

PRODUCT CODE	**SMCBST**
A.P.P.L.E. PRICE	$45.00
SUG. RETAIL	$50.00
SHIP. WT.	1 LB.

Macintosh SOFTWARE

MacLION
from LION Systems International, Inc..

Serious data base power for serious Macintosh users. Now you can develope your own powerful relational data base systems easily with MacLION. Features include:

- Built-in applications generator allows you to design custom screens and reports.
- Join relations from different files by selecting "common fields"
- Change an Item of information and ALL references to that information are changed automatically.
- Built-in procedural language for those who choose to use it.

PRODUCT CODE	SMCLEO
A.P.P.L.E. PRICE	$225.00
SUG. RETAIL	$379.00
SHIP. WT.	5 LBS.

MAC.TRANSFER
from Southeastern Software

Mac.Transfer is an incredibly easy way to transfer information between the Macintosh and an Apple II+,IIe or IIc. Transfers can be made via modem or by directly connecting the two computers together using the Imagewriter printer cable and an Apple Super Serial card or equivalent at 300 or 9600 baud. Mac.Transfer comes with two program disks. (One for the Mac and one for the Apple II) and an instruction manual.

PRODUCT CODE	SMCTRN
A.P.P.L.E. PRICE	$33.75
SUG. RETAIL	$49.00
SHIP. WT.	8 OZ.

MODULA - 2 PROGRAMMING LANGUAGE
from Modula Corporation

The newest structured language defined by the father of Pascal. A full implementation including a system utilities, and library of modules. The M-code interpreter is small amd the M code is very compact (as much as 25% of the equivalent assembly code).

PRODUCT CODE	SMDMAC
A.P.P.L.E. PRICE	$135.00
SUG. RETAIL	$150.00
SHIP. WT.	4 LBS.

OMNIS 3 FOR THE MACINTOSH
from Blyth Computer Ltd.

OMNIS on the Macintosh simply stated is a dream come true. Imagine the powerful features described in the Apple II section, combined with the power and ease of use of the Macintosh. A significant improvement over earlier versions, OMNIS now fully utilizes the Macintosh interface making the design of your database and reports a real pleasure. Multi-user capability.

PRODUCT CODE	SOMMAC
A.P.P.L.E. PRICE	$275.00
SUG. RETAIL	$495.00
SHIP. WT.	3 LBS.

OverVUE 2.0
from ProVUE Development Corporation

OverView is the easy to use memory based data base that has been given high marks by all reviewers. Excellent search and sort capability as well as easy to use graphics. For users of "full" data fields that requires speed and ease of use. See the reviews in *32 little apples*.

PRODUCT CODE	SOVER
A.P.P.L.E. PRICE	$185.00
SUG. RETAIL	$295.00
SHIP. WT.	3 LBS.

WindoWare
from Macadam Software,Inc.

Desk accessories for the Mac. Yours for this special low price of $39.00. (Reg. $59.00) Includes both phone book and calendar. Follows Apple standards to be compatible with all present and future systems.

PRODUCT CODE	SMWW
A.P.P.L.E. PRICE	$39.00
SUG. RETAIL	$79.95
SHIP. WT.	12 OZ.

ELECTRONIC ARTS™ [NEW]

DELUXE MUSIC CONSTRUCTION SET

The first complete music composition tool for Mac. Simple enough for a beginner yet powerful enough for a professional. DMCS is the ultimate music tool. It gives you everything you need to compose professional quality music, hear it play, and print professional quality sheet music. It's MIDI™ compatable, so you can compose your music on DMCS and play it through your synthesizer.
- 50 more features than Music Works.
- Triplets, Quintuplets, Slurs, Ties, Beams.
- Dynamic markings, crescendos, dimunuendos.
- Compose from on- screen keyboard.
- Four voice sound, 16 instruments.
- Prints professional sheet music with lyrics, fret notation. Supports the LazerWriter™, too.

PRODUCT CODE **SMCDMC**
A.P.P.L.E. PRICE $35.00

EXODUS: Ultima III

The epic fantasy role-playing masterpiece by Lord British. Over 90 weeks on the best seller charts. Converted to Mac by James Van Artsdalen.
- Select from a 20 character roster, with individual player movement.
- Many weapons, armor, and magic spells.
- Full patterns with advanced dungeon graphics.
- Adventure - style verb entry.
- from **Origin Systems'**

PRODUCT CODE **SMCUL3**
A.P.P.L.E. PRICE $40.00
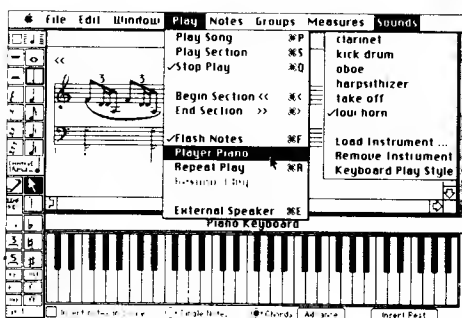
FINANCIAL COOKBOOK

Sophisticated but easy -to-use home financial calculator. Offers 32 recipes covering the most frequently asked questions on:
- Taxes and tax shelters.
- Lease vs. buy.
- Amoritization schedules.
- Auto and home financing.
- Inflation.
- Investments, savings, amd IRA accounts.
- Superb documention.

PRODUCT CODE **SFCBMC**
A.P.P.L.E. PRICE $33.75

Dr J & Larry Bird go ONE ON ONE

The number one sports simulation of all time. This program gives you the intoxicating feeling of actually getting to play one of these basketball superstars. You get to take all the skills and characteristics of either Bird or the Doctor- all there special moves, their shooting abilities, their rebound skills, their strength stammia and speed.
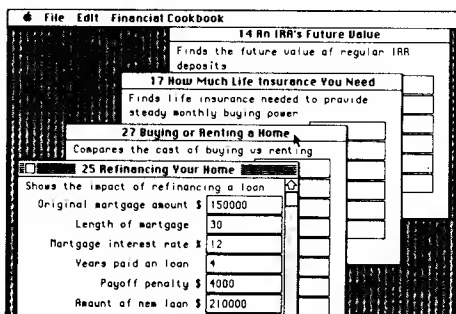
What happens when you get two all-stars like these together, and get them to help you design a software game ? You get "Game of the Year" and 5 other awards, and a smash best-seller. Now for the Mac too.

PRODUCT CODE **SMCONE**
A.P.P.L.E. PRICE $29.00

PINBALL CONSTRUCTION SET
by Bill Budge

Create your own video pinball games. In a class by itself. The most award winning home software product in history. It's been called the best program ever written for an 8-bit machine. Now for the Mac. Use Macpaint™ to paint new sets and create the pinball games of your dreams, save them and show them off. Comes with 5 ready-to-play games.
The all time classic.

PRODUCT CODE **SMCPCS**
A.P.P.L.E. PRICE $25.00

MACINTOSH PUBLIC DOMAIN SOFTWARE

MAC-001	MISCELLANEOUS
MAC-002	MISCELLANEOUS
MAC-003	REQUIRES FILEVISION
MAC-004	MISCELLANEOUS
MAC-005	MISCELLANEOUS
MAC-006	PICTURES
MAC-007	REQUIRES MICROSOFT BASIC
MAC-008	UTILITIES
MAC-009	SYSTEM UPDATES
MAC-010	SWITCHER 4.4
MAC-011	INSIDER DISK
MAC-012	DESK ACCESSORIES
MAC-013	FORTH / X - LISP
MAC-014	MACPAINT PICTURE
MAC-015	REQUIRES MICROSOFT BASIC
MAC-016	REQUIRES MICROSOFT BASIC
MAC-017	PDS FONTS 1
MAC-018	PDS FONTS 2
MAC-019	PDS FONTS 2
MAC-020	MISCELLANEOUS 1
MAC-021	MISCELLANEOUS 2
MAC-022	MAC MODULA 2
MAC-023	MAC MODULA 2

PRODUCT CODE **SMCPDS**
A.P.P.L.E. PRICE $7.00 / DISK or $40.00 / 10 DISKS
SUG. RETAIL N/A
SHIP. WT. 1 OZ. ea. disk.

A.P.P.L.E. BIG BOARD
Compatible with Apple II, II+, IIe

NEW

PRODUCT CODE	REGULAR PRICE	LIST PRICE
HB256K	$219	$299
HB512K	$329	$399
HB768K	$399	$499
HB1MEG	$450	$599

SHIPPING WEIGHT: 2 LBS.

Introducing a third generation memory card that gives you both great expandability and great versatility at an extraordinary price. Thanks to a low power design, even the 1 megabyte configuration draws less than 470 milliamps of power.

Versatility to users means that BIG BOARD is compatible with software written for the Synetix SSD (Flashcard) as well as for the Prometheus 128K card. Our Spreadsheet Version 2.0 already adds 256K to the space available for its worksheets. Compatible with PLUSWORKS XM for running Appleworks on the Apple II. Versatility also means that BIG BOARD comes complete with RAMDISK software for DOS 3.3, ProDOS, Pascal 1.2, and CP/M.

Versatility to programmers means that you can choose the active addressing mode both via a jumper on BIG BOARD or through software commands. Choose the mode that is most convenient for you In developing your application. The byte addressing mode has no conflicts with your use of the standard language card or //e auxiliary slot memory card. The bank switched addressing mode shares the language card area and serves you well as a location for running code.

In either case, whether you are a developer, Sunday programmer or an applications user, expect to see the Apple II doing some impressive things with Big Boards during the next year.

AP L CASE 1
by Dan Paymar
from Enhanceware™

Lower case adapter for Apple Motherboard revision #6 and earlier (the REV 0 through REV 6 have memory select blocks located on the left hand edge of the Motherboard-positon 1, rows D,E,F). Chip is compatible with both Apple BASICs, Pascal, CP/M, and most word processing software allowing lowercase display. Document shows how to install the ApLCase 1 quickly and easily so that you will be up and using lowercase in very little time.

PRODUCT CODE	HLC1
A.P.P.L.E. PRICE	$35.00
SUG. RETAIL	$39.95
SHIP. WT.	2 OZ.

AP L CASE 2
by Dan Paymar
from Enhanceware™

Same features as our original ApLCase above, but specifically for those post Rev 6 apples (Rev 7 thru Rev RFI

D). Includes easy installation instructions and program patches.

PRODUCT CODE	HLC2
A.P.P.L.E. PRICE	$25.00
SUG. RETAIL	$39.95
SHIP. WT.	2 OZ.

DICE
by Dan Paymar
from Enhanceware™

Special routines designed specifically for use with lower case adapters such as ApLCase, Dan Paymar and all others. DICE makes it easy to type in and display UPPER and lower case characters and special symbols directly from the keyboard. Utility also features a scrolling speed control, stop/start list, handy control character functions, non-flashing cursor and detailed instructions for making the "shift key" modification to your Apple.

PRODUCT CODE	SDIC
A.P.P.L.E. PRICE	$12.50
SUG. RETAIL	N/A*
SHIP. WT.	2 OZ.

AP L CASE 1 WITH DICE

PRODUCT CODE	HLC1A
A.P.P.L.E. PRICE	$42.50
SUG. RETAIL	$49.95
SHIP. WT.	3 OZ.

AP L CASE 2 WITH DICE

PRODUCT CODE	HLC2B
A.P.P.L.E. PRICE	$32.50
SUG. RETAIL	N/A
SHIP. WT.	2 OZ.

APPLE //e 80 COLUMN, EXTENDED RAM BOARD

Quality board for the Apple IIe ONLY. RAM board contains 64K of memory and uses standard Apple Protocol.

PRODUCT CODE	H80C
A.P.P.L.E. PRICE	$79.00
SUG. RETAIL	$169.95
SHIP. WT.	8 OZ.

AP RAM 16K

Plug in another 16K of memory to your 48K Apple with our economical 16K RAM card. Quality-made card plugs into slot 0 of your Apple and provides extra memory for loading the alternate BASIC language, Pascal, CP/M, moving DOS, and running A.P.E. and BIG MAC.C as well as other software and hardware packages requiring the extra room.

PRODUCT CODE	HP16
A.P.P.L.E. PRICE	$60.00
SUG. RETAIL	$99.00
SHIP. WT.	2 LBS.

HARDWARE Apple II

E.C. (Economical Controller)

NEW

A new low-priced disk controller card that is 100% Apple compatible. Two drive connections, boots DOS 3.3, ProDOS, Pascal and CP/M.

PRODUCT CODE	**HDCC**
A.P.P.L.E. PRICE	$40.00
SUG. RETAIL	$79.00
SHIP. WT	1 LBS.

E.D. (Economical Drive)

NEW

Tired of paying high prices for name brand products and expensive packaging? We now have an alternative for you in this 35-40 track, slim-line drive for the Apple II, II+ and IIe. 100% Apple compatible, our new drive uses a Newtronics drive mechanism and unlike other half-height, can be used as drive 1 and will boot copy protected software.

PRODUCT CODE	**HADR99**
A.P.P.L.E. PRICE	$109.00
SUG. RETAIL	$149.00
SHIP. WT.	5 LBS

DRIVE ADAPTOR //c

NEW

With this part, you can adapt any Apple compatible disk drive to operate with your Apple IIc.

PRODUCT CODE	**H2CCBL**
A.P.P.L.E. PRICE	$20.00
SUG. RETAIL	$29.95
SHIP. WT.	3 OZ.

//c DRIVE CABLE

NEW

For use with the Economical Drive to convert it to use with a //c.

PRODUCT CODE	**H2CCBR**
A.P.P.L.E. PRICE	$20.00
SUG. RETAIL	$25.00
SHIP. WT.	6 OZ.

MACH 3.5 CARD

NEW

Go supersonic first class at supersaver rates! This board is an elegant solution for the persion who doesn't like to wait. The MACH 3.5 card can perform operations at up to 3 1/2 times the normal Apple speed. Simply plug it in, turn your Apple on, and hold onto your seat! There is no preboot to fuss with, no program patching to do, no worries. Copy protected software? No problem. Hard disk? No problem. This board may be the closest thing to magic that you will ever see working on an Apple!
It even works with the large extended memory cards popular for the //e. A complete description of the card , programing details, and benchmarks are available in the Oct and Nov 1985 issues of *Call -A.P.P.L.E.* Call the Hotline for questions on your application.

PRODUCT CODE	**HMACH**
A.P.P.L.E. PRICE	$209.00
SUG. RETAIL	$259.00
SHIP. WT.	1 IBS

MACH 3.5 (MV)

NEW

This is a special version of the MACH 3.5 card that works with the Saturn, Legend, and Prometheus memory expansion cards for the Appel II and II+ computers.

PRODUCT CODE	**HMACHM**
A.P.P.L.E. PRICE	$209.00
SUG. RETAIL	$259.00
SHIP. WT.	1 IBS.

MACH 3.5 UPGRADE

NEW

This is an upgrade for the (MV) version, purchased seperately It is a PAL set for the upgrade..

PRODUCT CODE	**HPALM**
A.P.P.L.E. PRICE	$25.00
SUG. RETAIL	$
SHIP. WT.	6 Oz.

MACH II JOYSTICK
from **C H products**

The ultimate joystick with totally coordinated X/Y control (not just a four-way switch like many other joysticks). Stick movement is precisely translated to cursor positioning on the screen. Fine trim adjustments on both axes will enable operator to finely tune the joystick to electrical center for each software requirement. Joystick features a self centering function which can be easily disengaged. Works with Apple II, II+ and //e comes with a full 90-day warranty.

PRODUCT CODE	**HJOYST**
A.P.P.L.E. PRICE	$34.00
SUG. RETAIL	$44.95
SHIP. WT.	1 LB.

MACH III JOYSTICK
from **C H products**

Same description as above. In addition, joystick features a push button switch on the stick handle and a stainless steel ball as the main pivot to provide even greater accuracy, reliability and movement.

PRODUCT CODE	**HJMACH**
A.P.P.L.E. PRICE	$44.00
SUG. RETAIL	$59.95
SHIP. WT.	1 LB.

MACH III JOYSTICK   (For the IIe)
from **C H products**

This is the same joystick as the MACH III except that it is specially designed to fit the IIe & IIc socket.

PRODUCT CODE	**HJOMA3**
A.P.P.L.E. PRICE	$49.00
SUG. RETAIL	$59.95
SHIP. WT.	1 LB.

MultiModem IIe
TELECOMPUTING
SYSTEM
from MultiTech systems

A 300 baud intelligent plug-in modem card and MultiCom II communications software. Serial interface card not required. Includes automatic dialing, automatic answering, busy number redialing, and phone number storage. Dial from your Apple keyboard. A speaker allows you to monitor the progress of your call. Plug in your telephone and use the same line for talking. Compatible with Apple II,II+,IIe. Use with Modem Magician for more advanced communication needs.

PRODUCT CODE	HMOD2E
A.P.P.L.E. PRICE	$179.00
SUG. RETAIL	$229.00
SHIP. WT.	3 LBS.

MultiModem AH2
from MultiTech systems

Here is the 1200 baud intelligent modem you have been looking for! This modem is 100% Hayes SMARTMODEM compatible with auto-dialing, auto-answering, and much more. The AH2 stores 10 31digit phone numbers. Backed by Multitech Systems full two-year warranty. Requires serial interface card for II,II+,IIe and cable for Mac or IIc. Includes over $350.00 worth of free database time. Supports Modem Magician and AE Pro among others for II family. Mac Terminal, Red Ryder and others for Mac.

PRODUCT CODE	HMODHC
A.P.P.L.E. PRICE	$ 379.00
SUG. RETAIL	$499.00
SHIP. WT.	5 LBS.

MultiModem 224AH
from MultiTech systems

NEW

Here is the intelligent modem that runs three different speeds; 300,1200 and **2400** bits per second. It features autodial automatic answer, Hayes-compatability, and a memory for frequently called numbers. The MultiModem 224 is compatible with all the important modem standards used in personal computer and terminal data communications, including the Bell/AT&T 212a and the CCITT V.22bis. Databases and networks nationwide are now upgrading to 2400 bps. This is the modem for today's and tomorrow's telecommunucations.

PRODUCT CODE	HMO224
A.P.P.L.E. PRICE	$649.00
SUG. RETAIL	$795.00
SHIP. WT.	5 LBS.

MULTIRAM //e
from Checkmate Technology

NEW

MultiRam //e is a new expandable (up to 768k) extended 80-column card for the Apple //e. An optional piggyback board can increase total on-board memory to 1.5 megabytes along with RGB video! Use it with our THE Spreadsheet Version 2.0 expanding space available to 210K. Combine a 768K MultiRam with APPLEWORKS for an expanded desktop space of 551K, with a database capacity increased to 5100 records. The driver software even splits very large data files to multiple floppy diskettes for you automatically. Comes with 320K RAM onboard, drivers in DOS 3.3 and ProDOS to

turn the MultiRam //e into a super fast RAM-disk. A CP/M driver is available at additional cost from Checkmate.

Standard features include:

• Compatibility with both enhanced and nonenhanced Apple //e.
• Easy to expand at any time.
• Full 5 year warranty on card and components.
• **Software included to:**
    - Configure AppleWorks to use all MultiRam //e memory.
    - Use MultiRam //e as ProDOS or DOS 3.3 RAM disk emulator.
    - Test MultiRam //e memory for defective RAM.
  Optional features include:
• 64K or 256K RAM kits to expand MultiRam //e .
•The MultiRam RGB card adds 768K expansion capacity - produces RGB video signal.
• CP/M RAM disk emulator.
• 16 bit 65816 processor card to give the Apple //e super-micro capabilities (available soon)

PRODUCT CODE	HM64K	HM768K
A.P.P.L.E. PRICE	$149.00	$ 299.00
SUG. RETAIL	$199.00	$ 499.00
SHIP. WT.	2 LBS.	2 LBS.

MULTIVIEW 80/160
from Checkmate Technology

Here is a high-performance video display card with a good selection of modes for use with a standard monitor such as the Gorilla, NEC,BMC, and others with a minimum 12 MHz bandwidth: 80 X 24, 96 X 24, 132 X 24, 160 X 24. Additional modes (80 X 32, 80 X 48, 132 X 30) use interlace. While interlacing can be displayed on a standard monitor, a high persistance monitor such as the Amdek 300 or the Apple III would be a necessity for long term use. Other features include a useful "eyesaver" command for adjusting the display to fill the monitor screen. Screen attributes may be set easily; choose twelve combinations of underlining, bold, normal, and inverse. Uses standard protocols to work with CP/M and Pascal. A special pre-boot program is available for compatibility with THE Spreadsheet version 2.0 and others. A handy reverse scrolling command is implemented which makes full use of the 4k video buffer. In 80 X 24 mode, you can back up and view again more than 25 lines that had disappeared off the top of the screen. (Modes that display more characters on the screen can reverse scroll fewer lines). Draws about 25% less 5 volt power than the Ultraterm.

PRODUCT CODE	HMULTI
A.P.P.L.E. PRICE	$199.00
SUG. RETAIL	$329.95
SHIP. WT.	2 LBS.

PADDLE-ADAPPLE
from Southern California Research Group

Expand your game Paddle/Joystick/KoalaPad world with this game I/O extender. The Paddle-AdApple offers two 16-pin connector sockets on one 18 inch cable enabling you to plug in two exterior devices (i.e.,KoalaPad and Joysticks) at the same time. In addition, a configuration block goes in if

you want to run two joysticks at the same time. The 18 inch cable lends more mobility to you.

PRODUCT CODE	HPADDL
A.P.P.L.E. PRICE	$25.00
SUG. RETAIL	$29.95
SHIP. WT.	5 OZ.

PANASONIC KX-P1091 PRINTER

This printer features a 10 inch wide carriage, 120 character per second speed, Pica, Elite and condensed fonts, and high density bit graphics (1920 dots/line). The outstanding print is near letter quality, with proportional spacing, subs cripting and superscripting as needed. The friction/tractor feed can handle up to 3-part paper. It is Epson RX-80, and IBM-PC dot matrix/graphics compatible. The print head has a 150 million character life and the ribbon a 4 million character life. The 8 bit parallel interface and 1K buffer are standard. A super printer at a reasonable price.

PRODUCT CODE	HPANPT
A.P.P.L.E. PRICE	CALL
SUG. RETAIL	$399.00
SHIP. WT.	20 LBS.

PANASONIC PRINTER RIBBONS -
(for KX-P1090, KX-P1091, KX-P1092)

PRODUCT CODE	HPANRI
A.P.P.L.E. PRICE	$10.00
SUG. RETAIL	$19.95
SHIP. WT.	5 OZ.

RIGHT NOTCH

A handy tool that will double your disk storage capabilities. One bite from the "Right Notch", and a clean square notch is positioned in just the right place allowing you to use the reverse side of the disk for storage needs.

PRODUCT CODE	HRIGNO
A.P.P.L.E. PRICE	$15.00
SUG. RETAIL	$19.95
SHIP. WT.	2 OZ.

REPEATERRRR

Install this handy circuit board between the keyboard and the encoder board to obtain "repeat on any key held down". If repeat key is depressed, repeat speed increases. Includes a very nice shift key modification kit. Requires the two piece keyboard.

PRODUCT CODE	HRPT
A.P.P.L.E. PRICE	$35.00
SUG. RETAIL	$29.95
SHIP. WT.	5 OZ.

SUPER FAN II

Zener-Ray transient voltage suppressor and power filter squelches spikes up to 6000 Amps (even those caused by lightening) while responding up to 100 times faster than the Apple built-in filter. Removes air at 17 cubic feet per minute. Unit has lighted switch in front, two accessory plugs in rear and clips to Apple II, IIe or monitor stand. The convenience and the efficient temperature stabilization will make your Apple last longer.

PRODUCT CODE	HFAN
A.P.P.L.E. PRICE	$ 59.00
SUG. RETAIL	$ 89.00
SHIP. WT.	3 LBS.

VERSACARD

Four of the most popular Apple peripheral functions on one card! Provides (1) 6850 ACIA Serial Interface, (2) Eight-bit Parallel port, (3) Real-time Calendar/Clock, and (4) BSR Control interface. On-Board EPROM includes a terminal program. The VersaCard is fully compatible with Apple Pascal, CP/M, and BASIC, and no special disks or modifications are needed! Includes documentation and warranty card. (Note: connecting cables and ultrasonic Home Controller, and Graphitti Graphics Chips control are not included, but available separately.)

PRODUCT CODE	HVRC
A.P.P.L.E. PRICE	$150.00
SUG. RETAIL	$199.00
SHIP. WT.	2 LBS.

VERSACARD WITH PARALLEL
PRINTER CABLE   (6' long)

PRODUCT CODE	HVRC1
A.P.P.L.E. PRICE	$160.00
SUG. RETAIL	N/A
SHIP. WT.	2 LBS.

VERSACARD WITH SERIAL CABLE
(Male -- 6' long)

PRODUCT CODE	HVRC2M
A.P.P.L.E. PRICE	$160.00
SUG. RETAIL	N/A
SHIP. WT.	2 LBS.

VERSACARD WITH SERIAL CABLE
(Female -- 6' long)

PRODUCT CODE	HVRC2F
A.P.P.L.E. PRICE	$160.00
SUG. RETAIL	$N/A
SHIP. WT.	2 LBS.

VERSACARD ROM

Add Graphitti power to your Versacard. This firmware chip makes it a snap to transfer Apple graphic and text screens to printer without needing to load special software routines. In addition, you may send printer ESCape codes as control characters, set margins, line and page length, toggle high-bit, set video echo and linefeeds. Includes a special manual. Requires Applesoft in ROM for full graphics capability.

*Please specify printer type by selecting appropriate Product Code.

HVPREP	Epson, Panasonic
HVPRCI	C.Itoh
HVPRID	IDS
HVPROK	Okidata, Prowriter, NEC
HVPRAP	Apple Dot Matrix

A.P.P.L.E. PRICE	$25.00
SUG. RETAIL	$N/A
SHIP. WT.	6 OZ..

CABLES ONLY

VERSACARD PARALLEL CABLE (6' long)

PRODUCT CODE	HVPC
A.P.P.L.E. PRICE	$20.00
SUG. RETAIL	N/A
SHIP. WT.	4 OZ.

VERSACARD SERIAL CABLE (Male -- 6 long)

PRODUCT CODE	HVSLM
A.P.P.L.E. PRICE	$20.00
SUG. RETAIL	N/A
SHIP. WT.	4 OZ.

VERSACARD SERIAL CABLE (Female -- 6 long)

PRODUCT CODE	HVSLF
A.P.P.L.E. PRICE	$20.00
SUG. RETAIL	N/A
SHIP. WT.	4 OZ.

VIDEX UNIPRINT PARALLEL PRINTER INTERFACE

A single graphics printer interface compatible with over 25 printers! Works with Apple DOS, ProDOS, Pascal, Logo, and CP/M in Text mode. Special commands are available to control page width, length, and left margin. In graphics mode HIRES graphs and pictures (Double HIRES on the IIe) are easily printed (even in color on the IDS Prism printer). Parallel cable and extensive documentation included.

PRODUCT CODE	HVIDIN
A.P.P.L.E. PRICE	$74.00
SUG. RETAIL	$99.95
SHIP. WT.	1 LB. 6 OZ.

ZARDAX KEYBOARD CONNECTOR

The Zardax keyboard connector is required for use of Apple II+ computers with Zardax. The connector comes with straightforward installation instructions, no soldering required. Does not interfere with game paddle controls.

PRODUCT CODE	HZARKY
A.P.P.L.E. PRICE	$7.00
SUG. RETAIL	$8.00
SHIP. WT.	5 OZ.

Macintosh Hardware

A.P.P.L.E. 512K MAC UPGRADE KIT

A complete Mac upgrade Kit. Includes detailed instructions, memory logic circuit, sockets, and 256K 150 nSec chips.

PRODUCT CODE	HMUPG
A.P.P.L.E. PRICE	$99.00
SUG. RETAIL	$N/A
SHIP. WT.	1 LBS.

Mac's-a-Million™
from *Sophisticated Circuits*
the 1.5 Meg Memory upgrade

At last the price breaker for large Mac memory upgrade, dsitributed exclusively by A.P.P.L.E. Co-op. Enjoy the power of multiple applications (up to eight) running under Switcher, or use part or all as a RAM disk. Less cost per bite than an external drive, and there is no comparison for speed. This is a easy to install kit that includes a quiet cooling fan for longer life for the Mac. Does not require the removal of the 68000 chip. Works with both the 128K and 512K units. A 512K Mac has a full 2048K of adressible memory.

Introductory price of $499.00 (Installation is available for $100)

PRODUCT CODE	HMAM
A.P.P.L.E. PRICE	$499.00
SUG. RETAIL	$699.00
SHIP. WT.	4 LBS.

MacTablet™
from *Summagraphics* Corporation

For the user serious about graphics on the Mac. This tablet has a 6 x 9 inch work space with a resolution of 500 lines per inch and an accuracy of ±.025 in.l Comes with cusor, power pack, and installation diskette. Plugs into modem port and installs as a desk accessory. Compatible with MacPaint, MacDraw, MacCad and most other graphics packages. MacTablet's stylus gives you finger-tip control, so whether you're an artist, designer, engineer, architect or you simply want to add some punch to your presentations, MacTablet will make your art work better, easier and faster.

PRODUCT CODE	HMTAB
A.P.P.L.E. PRICE	$329.00
SUG. RETAIL	$ 395.00
SHIP. WT.	5 LBS.

MAC·TURBO·TOUCH
from Assimilation, Inc.

While it may not be possible to improve on the mouse trap, we have found a definate improvement over the standard old Mouse! If you're tired of reaching for your mouse and not finding it, or if your cramped for desk space and your mouse hasn't enough room to run, or, if you're simply looking for a faster way to communicate with your Mac, then Mac·Turbo·Touch™ may be for you. The Turbo Touch is a "track ball" input device that plugs directly into the mouse port on the Mac. It has two mouse buttons on either side of the ball so it can be set on the right or left hand side of the keyboard, and once positioned, that's where it stays! From then on you need only move your hand to the same place and roll the ball with a finger or two. The slightest touch of the ball positions the cursor quckly and accurately on the screen. Mac·Turbo·Touch just might be a good reason for placing the Mouse on the endangered species list. And Assimilation gets our "atta boy!" award for developing a genuinely useful accessory for the Macintosh.

PRODUCT CODE	HTT
A.P.P.L.E. PRICE	$ 89.00
SUG. RETAIL	$ 109.00
SHIP. WT.	2 LBS.

NUMERIC·TURBO™
from Assimilation,Inc.

Mac·Turbo·Touch™ with a full-scale numeric key pad. The Numeric·Turbo includes cursor keys and direct function keys so you no longer have to use the Control or Shift key on the Mac keyboard for function entry.

PRODUCT CODE	HMNTT
A.P.P.L.E. PRICE	$ 119.00
SUG. RETAIL	$149.00
SHIP. WT.	3 LBS.

Mac Modem Package
MultiModem AH2 with Red Ryder & cable

Here is the 1200 baud intelligent modem you have been looking for! This modem is 100% Hayes SMARTMODEM compatible with auto-dialing, auto-answering, and much more. The AH2 stores 10 31digit phone numbers. Backed by Multitech Systems full two-year warranty. Comes with Mac cable and Red Ryder 6.0 This outstanding telecommunications program Is distributed as "freeware". That is, you get It for free...then if you like it and use it, simply send the author his hard earned reward of $40.00. Remember, you're on your honor.l

PRODUCT CODE	HMODRD
A.P.P.L.E. PRICE	$ 399.00
SUG. RETAIL	$589.00
SHIP. WT.	5 LBS .5 OZ.

Ram-Stak™
from AST RESEARCH INC.
for the Lisa™ (Macintosh XL™)

This is the add on memory board for the Lisa™ computer. This is a full 1.5 Mbyte configuration that allows a full 2Mbyte of memory on the Lisa., and a full 2Mbyte under MacWorks as either main memory or RAM disk. Like all AST products RamStak has been thoroughly tested to guarantee 100% compatibility with all versions of the Lisa. It has a one year limited warranty on parts and labor. Just plug this board and expand your memory.

PRODUCT CODE	HMRS
A.P.P.L.E. PRICE	$ 899.00
SUG. RETAIL	$1589.00
SHIP. WT.	5 LBS.

THUNDERSCAN
by THUNDERWARE software by Andy Hertzfeld

A complete scanning system to transfer pictures to MacPaint. Works with the Imagewriter printer (both narrow and wide carrage). Replaces the ribbon cartrage with a scanning laser. Includes software for control and enhancment of the graphic images.

PRODUCT CODE	HTHUN
A.P.P.L.E. PRICE	$199.00
SUG. RETAIL	$ 229.00
SHIP. WT.	4 LBS

PUBLICATIONS

APPLE PRODOS: ADVANCED FEATURES FOR PROGRAMMERS
by Gary B.Little

NEW

This great manual includes an overview of ProDOS, file management, the Machine Language Interface, the Basic.System, interrupts, clock drivers, disk drivers, and more. This is a must for anyone interfacing on an advanced level with ProDOS.

PRODUCT CODE	**PPDOS**
A.P.P.L.E. PRICE	$15.00
SUG. RETAIL	$19.95
SHIP. WT.	1 LB. 6OZ.

BENEATH APPLE DOS
from Quality Software

Perfect companion to DiskPak 6B-16 and the Apple DOS manual. Comprehensive book continues where the DOS manual left off and details all versions of the Apple Disk Operating System and how it may be modified OR enhanced to suit your applications. A must for the programmer!

PRODUCT CODE	**PBAD**
A.P.P.L.E. PRICE	$17.00
SUG. RETAIL	$19.95
SHIP. WT.	1 LB.

BENEATH APPLE ProDOS
from Quality Software

From the publishers who brought us Beneath Apple DOS and Bag of Tricks comes yet another great programmer's aid. Beneath Apple ProDOS presents a critical non-Apple perspective on this operating system. A must for the person who wants to know what makes ProDOS tick.

PRODUCT CODE	**PBAPRD**
A.P.P.L.E. PRICE	$18.00
SUG. RETAIL	$19.95
SHIP. WT.	1 LB.

BOUND SET OF Call-A.P.P.L.E. ISSUES

Complete set of the individual issues of our magazine for the indicated calendar year. Each is fully indexed for easy reference and binder punched for easy handling.

1982 CALENDAR YEAR

PRODUCT CODE	**PPK5**
A.P.P.L.E. PRICE	$18.50
SUG. RETAIL	$36.00
SHIP. WT.	6 LBS.

1983 CALENDAR YEAR

PRODUCT CODE	**PPK6**
A.P.P.L.E. PRICE	$18.50
SUG. RETAIL	$36.00
SHIP. WT.	6 LBS.

1984 CALENDAR YEAR

PRODUCT CODE	**PPK7**
A.P.P.L.E. PRICE	$18.50
SUG. RETAIL	$36.00
SHIP. WT.	6 LB.

1985 CALENDAR YEAR

PRODUCT CODE	**PPK8**
A.P.P.L.E. PRICE	$18.50
SUG. RETAIL	$36.00
SHIP. WT.	6 LBS.

Call-A.P.P.L.E. BACK ISSUES

CODE	ISSUE	PRICE
MM-A 80	March/April 80	$3.00
MMAY 80	May 80	$3.00
MJUN 80	June 80	$3.00
MN-D 80	Nov/Dec 80	$3.00
MJAN 81	January 81	$3.00
MM-A 81	March/April 81	$3.00
MJUN 81	June 81	$3.00
MJ-A 81	July/Aug 81	$3.00
MSEPT 81	September 81	$3.00
MOCT 81	October 81	$3.00
MN-D 81	Nov/Dec 81	$3.00

Shipping weight for each issue is 8 oz.

Back issues for 1982,1983,1984, and 1985 may be ordered for $3.00 each

The product code may be figured by adding the first three letters of the month's name and the year to the letter "M". For example, the April, 1983 issue's Product Code would be: MAPR83.

Call-A.P.P.L.E. IN DEPTH

Diskettes containing all programs published in Call-A.P.P.L.E. In Depth are also available.

VOL 1 "ALL ABOUT APPLESOFT"

Comprehensive and detailed tour through the Applesoft language - from the construction of BASIC, variables, high resolution graphics subroutines to extending the language with Ampersand functions. Publication includes many useful application and utility programs designed to promote your understanding of Applesoft and how it can work for you. Recommended for all Apple users, although may be a bit heavy going for beginners. Now in its 2nd Printing!

PRODUCT CODE	**PID1**
A.P.P.L.E. PRICE	$7.00
SUG. RETAIL	$7.50
SHIP. WT.	1 LB.

"ALL ABOUT APPLESOFT" DISKETTE

PRODUCT CODE	**SIN1**
A.P.P.L.E. PRICE	$16.50
SUG. RETAIL	N/A
SHIP. WT.	1 OZ.

PUBLICATIONS

VOL 2 "ALL ABOUT PASCAL"

Wide range of new and useful programs and "in-depth" articles specializing in the Apple Pascal language. Switch to and from BASIC and the Pascal environment, decode a compiled program, edit your own graphics, format text and programs, research the subject with the expanded and up-to-date bibliography, and more! Almost everything you wanted to know about Apple Pascal but didn't know where to look. Also contains supplemental information for beginners.

PRODUCT CODE | **PID2**
A.P.P.L.E. PRICE | $11.00
SUG. RETAIL | $12.50
SHIP. WT. | 2 LBS.

"ALL ABOUT PASCAL" DISKETTE

PRODUCT CODE | **SIN2**
A.P.P.L.E. PRICE | $20.00
SUG. RETAIL | N/A
SHIP. WT. | 3 OZ.

VOL 3 "ALL ABOUT DOS"

"All About DOS" contains 288 pages of DOS tutorials and utility programs. "All About DOS" is a fine addition to your A.P.P.L.E. library.

PRODUCT CODE | **PID3**
A.P.P.L.E. PRICE | $13.50
SUG. RETAIL | $15.00
SHIP. WT. | 2 LBS.

"ALL ABOUT DOS" DISKETTE

PRODUCT CODE | **SIN3**
A.P.P.L.E. PRICE | $15.00
SUG. RETAIL | N/A
SHIP. WT. | 2 OZ.

VOL 4 "ALL ABOUT APPLEWRITER"

Make Applewriter work for you. A technical treatise on Applewriter ;//e. 19 chapters include full descriptions of each facet, annotating each of four work areas, memory management, zero page, entry points, WPL, modifications, etc. Full descriptions of each subroutine, indexed by address. Not for Beginners.

PRODUCT CODE | **PID4**
A.P.P.L.E. PRICE | $12.50
SUG. RETAIL | $15.00
SHIP. WT. | 1 LB.

MACINTOSH - PAST,PRESENT,AND FUTURE
Andy Hertzfeld   January 21, 1985

For those who made it to the meeting but couldn't get in...For those who would have liked to but simply couldn't.

Here on video tape is ANDY HERTZFELD computer programmer extraordinaire and major contibutor to the Macintosh operating system as he discusses the Mac, its past and development, how it sizes up for the present, where it's headed. Also included are demonstrations of THUNDERSCAN and THE SWITCHER, both written by Andy.

PRODUCT CODE | **HANDYH (VHS)**
A.P.P.L.E. PRICE | $25.00
SUG. RETAIL | N/A
SHIP. WT.1 LB.

PRODUCT CODE | **HANDYB (BETA)**
A.P.P.L.E. PRICE | $25.00
SUG. RETAIL | N/A
SHIP. WT. | 1 LB.

INSIDE THE APPLE IIc
by Gary B. Little

Finally we have a good inexpensive reference manual for the //c! If you have ever wondered how the serial port works or what the pinouts of the game ports are, you can find the answers here. More than 350 pages of excellent material.

PRODUCT CODE | **PIN2C**
A.P.P.L.E. PRICE | $15.75
SUG. RETAIL | $
SHIP. WT. | 1 LB. 12 OZ.

INSIDE THE APPLE IIe
by Gary B. Little

This is the book IIe enthusiasts have been waiting for! Inside The Apple IIe offers a comprehensive look at the advanced features and capabilities of the APPLE IIe, explores the fundamentals behind the 6502 microprocessor, the operating systems (DOS 3.3 AND ProDOS), the inner workings of disks and also, complete discussions on:

How to use auxiliary memory on the IIe
How to design and implement keyboard input routines
How to use double-width graphics
How to speed up the cursor auto repeat rate
How to digitize and play back your own voice!

Inside The Apple IIe is a superior technical reference and is written in a clear and easily understood style.

PRODUCT CODE | **PINS2E**
A.P.P.L.E. PRICE | $18.00
SUG. RETAIL | $19.95
SHIP. WT. | 2 LBS.

PEEKING AT Call-A.P.P.L.E.

This annual publication collects all the articles of Call-A.P.P.L.E. magazine for the given year into one volume. Especially recommended for anyone about to become an Apple owner, future or present member of A.P.P.L.E. Even better when combined with the Anthology Volumes for the corresponding year!

PUBLICATIONS

VOL 2, 1979 COMPENDIUM

PRODUCT CODE	PPK2
A.P.P.L.E. PRICE	$10.00
SUG. RETAIL	N/A
SHIP. WT.	2 LBS.

VOL 3, 1980 COMPENDIUM

PRODUCT CODE	PPK3
A.P.P.L.E. PRICE	$15.00
SUG. RETAIL	N/A
SHIP. WT.	2 LBS.

THE APPLE ALMANAC

This reference volume brings together in one place ASCII charts, opcodes, PEEK and POKE charts plus vital DOS information, graphics chart and algorithms. This is not a general tutorial for beginners, but is better suited for the intermediate to advanced computer user. A list of useful sources for learning about the various aspects of the Apple is included in case you have gaps in your knowledge about your computer.

PRODUCT CODE	PAPALM
A.P.P.L.E. PRICE	$17.50
SUG. RETAIL	$19.95
SHIP. WT.	2 LBS.

THE POWER OF APPLEWORKS

This tutorial manual will teach you how to get the most out of the Appleworks word processor, spreadsheet and database. Includes tips on data entry, report formatting and valuable exercises on spreadsheet applications including accounts payable, maintaining a stock portfolio, amortization and checkbook balancing.

PRODUCT CODE	PAPWRK
A.P.P.L.E. PRICE	$16.00
SUG. RETAIL	$19.95
SHIP. WT.	1 LB.

USING 6502 ASSEMBLY LANGUAGE

This simple and understandable book "was written with the beginner in mind" and covers not only the theory behind 6502 machine language, but the practical aspects and how they apply to you and your Apple. Contains complete Sweet 16 tutorial, many illustrations, examples, and exercises to advance you from a 'beginner' to an 'intermediate' assembly language programmer.

PRODUCT CODE	PU65
A.P.P.L.E. PRICE	$17.00
SUG. RETAIL	$
SHIP. WT.	1 LB.

WHAT'S WHERE IN THE APPLE

Atlas and gazateer of the Apple II memory for the BASIC programmer. Each entry describes a single memory location, given in decimal and hex, and (if applicable) the name of the symbolic label, followed by a brief explanation of the routine which resides there. A definite must for those wanting a PEEK's and POKE's dictionary and with an insatiable appetite for more Apple information.

PRODUCT CODE	PWWA
A.P.P.L.E. PRICE	$17.00
SUG. RETAIL	$
SHIP. WT.	1 LB.

ACCESSORIES

A.P.P.L.E. T-SHIRT

Proclaim your pride in the world's largest Apple user group. Silkscreened in four-color, A.P.P.L.E. T-shirts make great gifts for friends. Sizes S, M, L, XL.

Please specify size by choosing the appropriate product Code.

S	HTSHS
M	HTSHM
L	HTSHL
XL	HTSHX

A.P.P.L.E. PRICE	$5.00
SUG. RETAIL	N/A
SHIP. WT.	8 OZ.

BULK BLANK DISKETTES
(Brand Name Boxed)

Quality blank diskettes are 5 1/4" single-sided double-density with mylar hub ring for more durability and longer life. Box of 10.

PRODUCT CODE	HGEN10
A.P.P.L.E. PRICE	CALL
SUG. RETAIL	N/A
SHIP. WT.	8 OZ.

BULK BLANK DISKETTES
(Brand Name Boxed)

Single-sided 3.5" micro-floppy diskettes. Box of 10.

PRODUCT CODE	HMACDI
A.P.P.L.E. PRICE	CALL
SUG. RETAIL	N/A
SHIP. WT.	1 LB.

Double sided 3.5" micro-floppy diskettes. Box of 10

PRODUCT CODE	HMACDD
A.P.P.L.E. PRICE	CALL
SUG. RETAIL	N/A
SHIP. WT.	1 LB.

DISK BANKS

Store and protect your valuable diskettes in this unique and versatile disk filing system. Each "bank" holds up to 10 diskettes and features a slide-out drawer, convenient interlocking grooves on sides & top for stacking and expansion, and sturdy, safe storage of your magnetic media.

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PRODUCT CODE      HDBA
A.P.P.L.E. PRICE  $6.00
   SUG. RETAIL    $9.95
      SHIP. WT.   1 LB.
```

FLIPSORT DISK ORGANIZER

Attractive functional disk storage system with capacity for 75 5 1/4" diskettes. Contains molded index with dividers. Cover protects disk from dust contamination. Comes in smoke color with front carrying handle.

```
PRODUCT CODE      HFLS
A.P.P.L.E. PRICE  $17.00
   SUG. RETAIL    $29.95
      SHIP. WT.   3 LBS.
```

MEDIA MATE 3

Protect, organize and store your 3 1/2" diskettes in this sturdy, high-impact plactic storage system.
Attractive,smoked see through cover, adjustable tab dividers. Holds up to 50 3 1/2" diskettes.

```
PRODUCT CODE      HDSMT3
A.P.P.L.E. PRICE  $12.99
   SUG. RETAIL    $16.95
      SHIP. WT.   2 LBS.
```

MOUSE MATe II

NEW

The Mouse MATe II is a special high density, foam-rubber tracking pad for the APPLE mouse. The smooth sealed top coating allows drag free operation and precision tracking for the mouse. The bottom side is open celled foam to prevent the pad from slipping on a smooth desk surface.
(11 3/4" X 9 5/8")

```
PRODUCT CODE      SMSMAT
A.P.P.L.E. PRICE  $7.50
   SUG. RETAIL    $9.95
      SHIP. WT.   1 LBS.
```

PRINTER RIBBONS

PANASONIC PRINTER RIBBON
(KX-P1090, KX-P1091, KX-P1092)

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PRODUCT CODE      HPANRI
A.P.P.L.E. PRICE  $10.00
   SUG. RETAIL    $19.95
      SHIP. WT.   5 OZ.
```

PROWRITER PRINTER RIBBON
(FITS IMAGEWRITER, APPLE DMP, NEC 8023A)

```
PRODUCT CODE      HPRC
A.P.P.L.E. PRICE  $5.50
   SUG. RETAIL    $9.95
      SHIP. WT.   3 OZ.
```

TALLY 160L PRINTER RIBBON

```
PRODUCT CODE      HTRC
A.P.P.L.E. PRICE  $12.50
   SUG. RETAIL    N/A
      SHIP. WT.   7 OZ.
```

TALLY 180L PRINTER RIBBON

```
PRODUCT CODE      HTRI
A.P.P.L.E. PRICE  $17.00
   SUG. RETAIL    N/A
      SHIP. WT.   1 LB.
```

CLOSEOUTS

EZ-LEDGER™
from Highlands Computer Services

This is the ideal record keeping system for a small home business or self-employed professional. It uses a single entry booking system which requires posting transactions either under INCOME or EXPENSE.

EZ-LEDGER will keep track of expense items under one of 99 user selected tax codes. Expense items will be entered under DEDUCTIBLE or NON-DEDUCTIBLE type codes. Automatic incrementing INVOICES can be produced and they will be posted to ACCOUNTS RECIEIVABLE 'holding file" or directly into INCOME. Keeps running year to date totals of all ledger files.

Uses ProDos and one or two disk drives.

PRODUCT CODE	SEZL
A.P.P.L.E. PRICE	$25.00
SUG. RETAIL	$60.00
SHIP. WT	1 LB.

ELF ABC
by Mike Culver

Elf ABC is delightful entertainment for children age 2-5. Each keypress brings another whimsical color picture accompanied by some well-chosen classical music in two harpsichord voices. Does it teach reading? No...but no harm in some light-hearted exposure!

PRODUCT CODE	SELF
A.P.P.L.E. PRICE	$12.00
SUG. RETAIL	$29.95
SHIP. WT.	2 OZ.

DRIVE ANALYZER DISKETTE
from Verbatim
Apple II,II+,IIe,IIc

This precision allignment diskette is a sure way to determine if your disk drive is operating properly. Menu-driven tests determine state of radial allignment, disk centering, speed and read-/write.

PRODUCT CODE	SDAN
A.P.P.L.E. PRICE	$10.00
SUG. RETAIL	$39.95
SHIP. WT.	9 OZ.

THINK TANK
for the Apple II or Mac
from Living Videotext, Inc.

This program is especially designed to help you organize ideas, turning brainstorming into detailed plans. Display or print your outline in complete detail, or select only major headings and subheadings. Lets you "see the forest" after working out details. Apple II version requires 64K of memory.

PRODUCT CODE	STHITK (Macintosh)
A.P.P.L.E. PRICE	$69.00
SUG. RETAIL	$150.00
SHIP. WT.	1 LB.

PRODUCT CODES	THKAP (Apple II)
A.P.P.L.E. PRICE	$69.00
SUG. RETAIL	$150.00
SHIP. WT.	1 LB.

T/MAKER
from Advanced Logic Systems

Integration strikes CP/M! T/Maker Version 3.0 is a CP/M 2.2 or 3.0 based multipurpose program with word processing, list processing, spreadsheet, file management and bar-charting capabilities. Word processing is at the heart of the package. FOR A MORE COMPLETE DESCRIPTION SEE SPRING SUMMER 1985 CATALOG.

PRODUCT CODE	SMAKER
A.P.P.L.E. PRICE	$ 129.00
SUG. RETAIL	$ 279.00
SHIP. WT.	4 LBS.

T/MAKER CP/M PACKAGE
from Advanced Logic Systems

The package comes with T/Maker and a fast 6 Megahertz CP/M card with 64K of onboard memory, along with the most recent revision of CP/M, version 3.0 (CP/M Plus). Also included are CBASIC, graphics extensions, and a full set of user manuals.

PRODUCT CODE	SPTMK
A.P.P.L.E. PRICE	$ 249.00
SUG. RETAIL	$ 499.00
SHIP. WT.	9 LBS.

Z - ENGINE
from Advanced Logic Systems

The Z-Engine is an economical and reliable CP/M interface card with complete hardware and software that adds the CP/M-80 operating system to your Apple computer. This type of interface is required to operate the hundreds of CP/M application software programs like WordStar, Supercalc, and Condor. ALS has provided special utilities designed to make using your CP/M operating system more convenient. It is the most economical Z-80 application for the Apple with full performance, fully licensed CP/M 2.2 from Digital Research, Inc.

PRODUCT CODE	HZENG
A.P.P.L.E. PRICE	$99.00
SUG. RETAIL	$195.00
SHIP. WT.	2 LBS.

TYPING AID

Plastic stand which is a must for any programmer who spends alot of time entering program listings or information from various sources. The "Typing Aid" has an adjustable stand for holding publications or listings of any size and is engraved with the CALL - A.P.P.L.E. logo.

PRODUCT CODE	HPAG
A.P.P.L.E. PRICE	$13.00
SUG. RETAIL	$19.95
SHIP. WT.	2 LBS.

MEMBERSHIP INFORMATION

Membership Categories and Privileges

All annual memberships include 12 issues of our magazine.

REGULAR and **INSTITUTIONAL** members may purchase any product offered by the Co-op, subject to some shipping restrictions. All members also have access to other services, including a technical assistance hotline, telecom-munications, and public domain software.

INSTITUTIONAL members may: (1) use purchase orders to buy products, (2) receive special discounts on quantity orders, and (3) request additional magazine subscriptions at a reduced rate.

SUBSCRIBERS receive the magazine only, and are not considered members.

NON-MEMBERS may order products at 10% above member prices. They are not eligible for hotline support, Co-op dividends, or member voting rights.

Membership Fees

REGULAR membership dues - $26 per year

New Regular members also pay a one-time, non-refundable application fee of $23.

INSTITUTIONAL membership dues - $100 per year

SUBSCRIPTION ONLY - $21 per year

POSTAGE: Dues and subscription fees include second-class magazine postage within the United States. An additional charge is made for foreign or first-class magazine delivery.

Please contact our Member Services department for details on eligibility for each membership category, application procedures, and additional postage rates.

Membership Numbers and Cards

A membership number and card are issued when you join the Co-op. Please indicate your member number and expiration date whenever you order products or write to us. The card is your proof of membership at fairs and other events away from our online records. A lost card may be replaced for $5.00. (Product Code FMCU)

PRODUCT PURCHASE INFORMATION

Our Pledge of Quality

We will make available to Co-op members quality products at the lowest possible prices. We will always operate the Co-op in a businesslike manner and follow policies that are in the best interests of our members and consistent with industry practices.

Ordering Products

Orders may be placed by mail, telephone (206-251-5222), our "800" line (800-426-3667, outside Washington state only), or in person at our retail store. For your convenience, a mail-in order form is printed in this catalog and in each issue of the magazine. We no longer accept orders through The Source.

Our policy is to inventory items offered in our catalog. Normal shipping time is within three working days. Orders for products temporarily out of stock will be placed in the order queue and filled as soon as possible. In-stock items listed on the same order will be shipped without delay.

Payments

Only U.S. funds can be accepted for payments to the Co-op. Except for Institutional members, full payment must accompany each order.

MasterCard and Visa are acceptable for any dues, fees, or purchases. Personal checks may be used for mailed-in payments and, with proper identification, for retail store purchases. A fee of $12 will be charged to your member account for each check returned due to insufficient funds.

Price Changes and Price Protection

Upon publication, each new catalog entirely super-cedes all previous catalogs and published product announcements. The prices listed in this catalog are subject to change. Any increases or decreases will be announced each month in our magazine, and will take effect on the first day of the issue month.

Increase

If a price goes up, we will honor all orders at the lower price that are received or postmarked before the effective change date. After that date, if the increase does not exceed 10% of the former price, we will process any orders that have payment enclosed for the lower amount, and bill you for the difference. Otherwise, you will be contacted for further instructions.

Decrease

If a price goes down--either through a special sale or a permanent reduction--and you had purchased the identical product from us at a higher price within 30 calendar days prior to the effective change date, then upon written request, you may receive a credit to your member account for the difference.

Discount Coupons

From time to time we offer special discount coupons. To qualify for a discount, the coupon must accompany your order--either by mail or in person.

INFORMATION

Shipping

Products on hand will normally be shipped within three working days after our receipt of your order. In general, products are shipped by United Parcel Service to the street address listed under your membership number, unless other instructions are included with the order. Shipments to APO or FPO addresses and to post office boxes must go by U.S. Mail.

Due to custom requirements, licensing, and warranty fulfillments, we are currently unable to ship hardware products outside the United States.

Special Handling

Expedited shipping service is available for "rush" orders on products in stock. Your order will be shipped within one business day, and you may also request either Federal Express or UPS Next Day service, if desired. The additional fee for expedited handling is $25 plus shipping costs.

Product Returns and Credits

Effective November 1, 1985, all orders will have printed on the invoice a "return by" date that is 30 calendar days after the date of shipment. If you return a product in resalable condition post-marked by this date, with all original packaging and documents intact and unmarked, we will credit your member account for the original purchase price, less shipping charges and a 10% handling fee. Please include a copy of your receipt and the order number.

All sales are considered final 60 calendar days after the shipping date shown on your receipt. If it is necessary to return a product after the "return by" date but before the "sale final" date, then you must first obtain a written return authorization from our Operations Division. When requesting this authorization, please supply the following information:

Your name
Member number and expiration date
Order number
Order date
Product code
Product name
Reason for the request
Do you have the original packaging
Do you have all documents and warranty cards ?
Are they unmarked?

All returns will be inspected to determine the condition of the merchandise. Any additional expenses we must incur for repackaging, repairing, or restoring an item to stock will be deducted from the credit. Products inspected and found to be beyond repair or not in resalable condition will not be accepted for credit. However, merchandise containing manufacturing defects will be handled according to the manufacturer's warranty policy.

Written requests for cash or charge-card refunds are subject to Co-op approval, and will not be honored for software products.

Communication and Correspondence

To inquire about the status of an order, write to our Member Services Department, or call (206) 251-5222 business days between 8:30 A.M. and 4:00 P.M. Pacific time.

To request information about the operation of products we sell, write to our Product Development Department or call our Hotline at (206) 251-0071 weekdays between 9:00 A.M. and 3:00 P.M. Pacific time (members only). Please allow at least six weeks for a written response to your letter.

ORDERING CHECKLIST

To speed all orders, please include:

1. Your Name as it appears in our records (same as on your mailing label).
2. Member number and expiration date.
3. Complete STREET ADDRESS (**not** Box number — see explanation below).
4. Phone number to reach you by day if we have questions.
5. Payment Including:
   Handling charge if applicable
   Domestic or Foreign Shipping Charges
   Magazine Postage if applicable
   (Sorry we do not accept COD or Purchase Orders on individual memberships.)

Each item you order needs:

6. Complete product name (and version if there is more than one product of that type).
7. Product Code

SHIPPING ADDRESS: We normally ship products by United Parcel Service (UPS). Therefore, the shipping address on your order cannot be a post office box. You may specify a P.O. Box for orders weighing less than 8 ounces. You also may make special arrangements for shipping some items via US Mail, Air Parcel Post, or UPS Second Day Air.

FOREIGN SHIPPING CHART

POSTAL TABLE	Zone I West Indies Central America, Columbia, Venezuela	Zone II All South American Countries (except in Table I), Europe, N. Africa	Zone III Asia, Mid East, S. Africa Australia and Pacific Islands	CANADA SHIPPING RATES
0-4 oz.	$ 1.51	$ 1.96	$ 2.41	0-4 oz. . . $ .76
4-8 oz.	2.13	3.95	3.95	4-8 oz. . . 1.48
8-12 oz.	2.75	4.12	5.49	8-12 oz. . 2.20
12-16	3.37	5.20	7.03	12-16oz. 2.84
16-20 oz.	3.99	6.28	8.57	2 lb. . . . 3.92
20-24 oz.	4.61	7.36	10.11	3 lb. . . . 5.00
24-32 oz.	5.85	9.52	13.19	4 lb. . . . 6.08
2-3 lbs.	8.29	13.84	19.39	
3-4 lbs.	10.73	18.16	25.59	*For weights over 4lbs:*
Each additional ½ lb. over 4 pounds add:				$6.08 + $1.08 additional per lb.
	1.22	2.16	3.10	*tional per lb. pound.*

ORDERING

APPLICATION

A.P.P.L.E. Co-op
290 S.W. 43rd St.
Renton, WA 98055